Public Utilities

Volume 56 No. 3 August 4, 1955

Cleveland "80" uses long reach, accurate pipe handling, teams up with trencher on tough 10-mile water line job

KIEFFER BROTHERS, contractors of Mount Carmel, Ill., matched their Cleveland Model 140 trencher and Model 80 side crane against 10 miles of really rough work on a 10-inch cast iron water main job in Loogootee, Ind., this winter. They report their decision paid off well in both time and money saved.

Cutting the 10-mile line through hilly terrain alongside a curving road, Kieffers' trencher maintained a fast, dependable pace overcoming frost and plenty of Indiana sandstone. Despite the tough digging in close quarters, the "140" left a clean trench ready for pipelaying.

Kieffers' "80" kept the pipelaying operation up close, usually only a couple of joints behind the trencher. The one-man-operated "80" picked up the pipe strung along the opposite side of the road, turned on its maneuverable full crawlers and accurately positioned the pipe for fast, easy installation. The Model 80's large, easy-acting hydraulic clutches and smooth handling brakes and boom hoist which placed and held pipe exactly to required positions also are responsible for its outstanding speed and accuracy when employed as a backfiller.

Cleveland's perfect operator visibility and well placed foot and hand controls, clearly shown in these photos, keep operators at top efficiency for top production all day long.

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Subscriptions: Address correspondence to PUBLIC UTILITIES FORTNIGHTLY, circulation department, Munsey Building, Washington 4, D. C. Allow one month for change of address.

Single copies $1.00. Annual subscription price (26 issues a year): United States and possessions, $15.00; Pan American countries, $15.00; Canada, $16.00; all other countries, $17.50.

Entered as second-class matter April 29, 1915, under the Act of March 3, 1879, at the Post Office at Baltimore, Md., December 31, 1936.

Public Utilities FORTNIGHTLY

VOLUME 56 AUGUST 4, 1955 NUMBER 3

ARTICLES

FEATURE SECTIONS

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

Executive, Editorial & Advertising Offices....MUNSEY BLDG., WASHINGTON 4, D. C.
Publication Office .....CANDLER BUILDING, BALTIMORE 2, MD.

Advertising Representatives:
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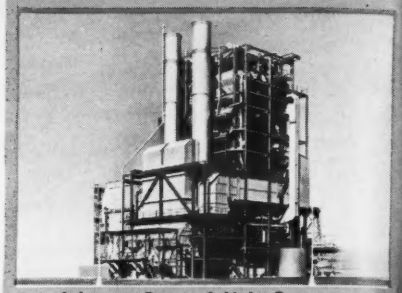
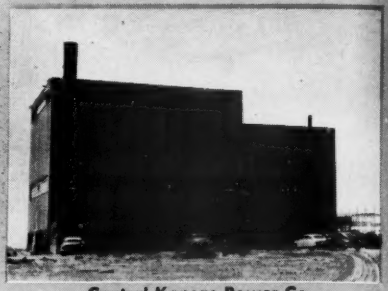
54 REASONS WHY ELECTRICITY IS AMERICA'S BEST BARGAIN

During the year of 1954 America's electric utilities broke all records in placing nearly 12 million kilowatts of new, highly-efficient generating capacity on the line. Over 6 million kilowatts of this new capacity are served by Babcock & Wilcox boilers. This is the greatest boiler capacity ever placed in operation during any year by a single boiler manufacturer.

Pictured here and on the following pages are the 54 stations in which one or more B&W boilers were placed in operation in 1954.



Arkansas Power & Light Company
Cecil S. Lynch North Little Rock, Ark.



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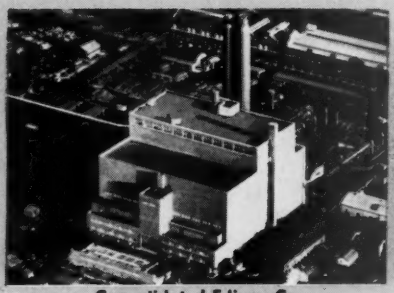
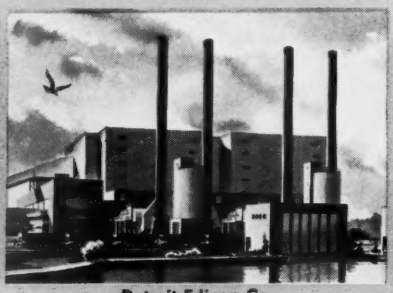
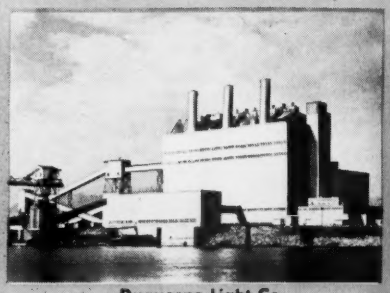
Ross Beach Hill City, Kans.



Consolidated Edison Co.
Astoria New York, N. Y.

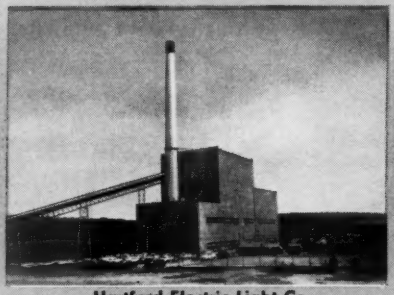


Detroit Edison Co.
St. Clair Detroit, Mich.



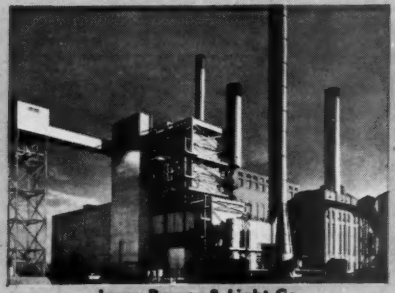
Duquesne Light Co.
Elrama Elrama, Pa.

City of Greenwood, Miss.
City Plant Greenwood, Miss.

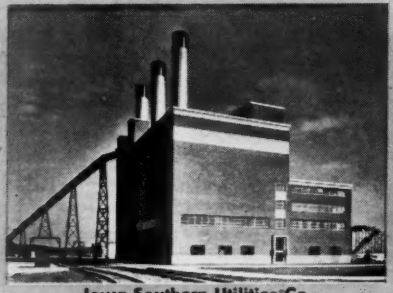


Hartford Electric Light Co.
Middletown Middletown, Conn.

Hawaiian Electric Co.
Honolulu Plant Honolulu, Hawaii

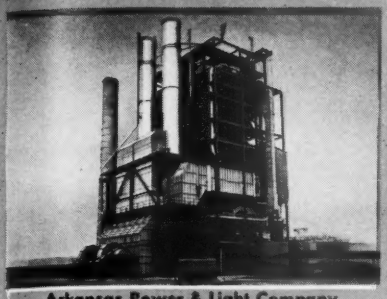


Iowa Power & Light Co.
Des Moines Des Moines, Iowa

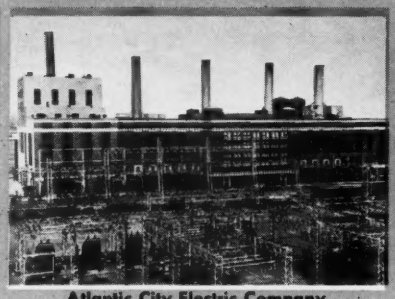


Iowa Southern Utilities Co.
Eddyville, Iowa

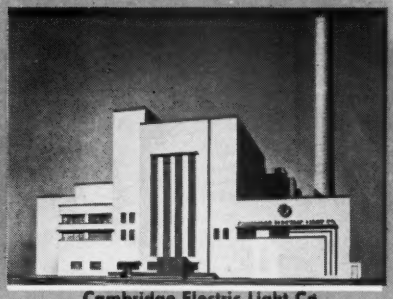
Kentucky Utilities Co.
Green River So. Carrollton, Ky.



Arkansas Power & Light Company
Harvey Couch Stamps, Ark.



Atlantic City Electric Company
Deepwater Deepwater, N. J.



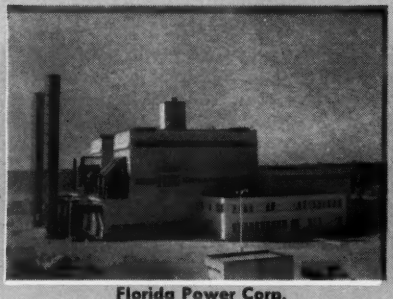
Cambridge Electric Light Co.
Kendall Square Cambridge, Mass.

Central Power & Light Co.
Lon C. Hill Lon Hill, Tex.

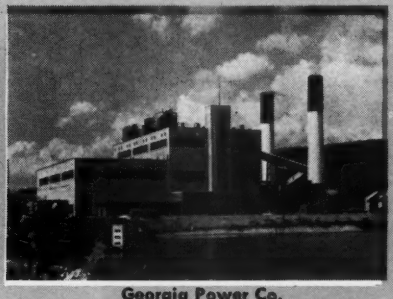
Cincinnati Gas & Electric Co.
W. C. Beckjord New Richmond, Ohio

Commonwealth Edison Co.
Ridgeland Stickney, Ill.

El Paso Electric Co.
Rio Grande El Paso, Tex.



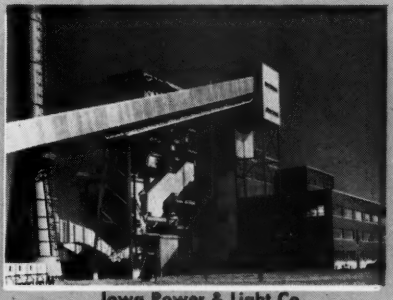
Florida Power Corp.
Suwannee River Ellaville, Fla.



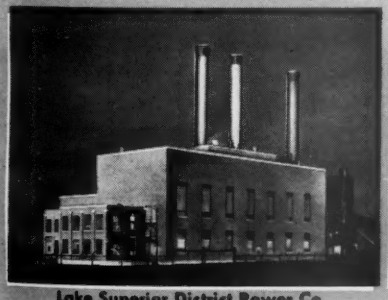
Georgia Power Co.
Plant Hammond Rome, Ga.

Houston Lighting & Power Co.
Webster Webster, Tex.

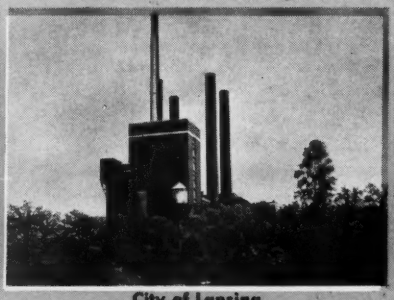
Indiana & Michigan Electric Co.
Tanners Creek Lawrenceburg, Ind.



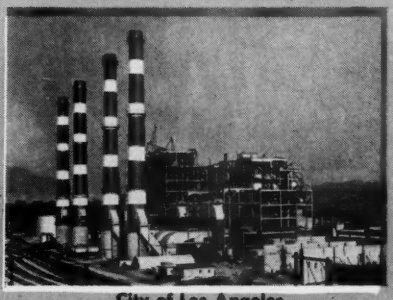
Iowa Power & Light Co.
Council Bluffs Council Bluffs, Iowa



Lake Superior District Power Co.
Bay Front Ashland, Wis.



City of Lansing
Moores Park Lansing, Mich.



City of Los Angeles
Valley Los Angeles, Calif.

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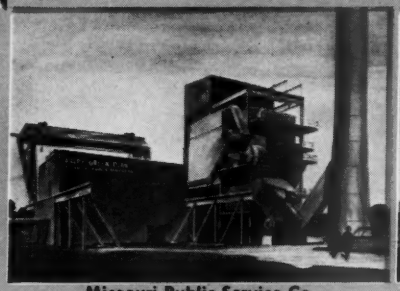
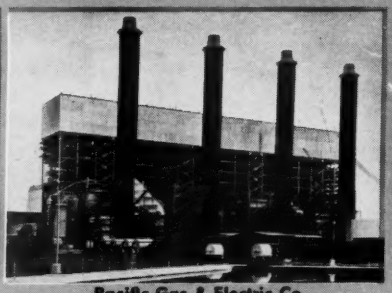


Missouri Public Service Co.
Ralph Green — Pleasant Hill, Mo.

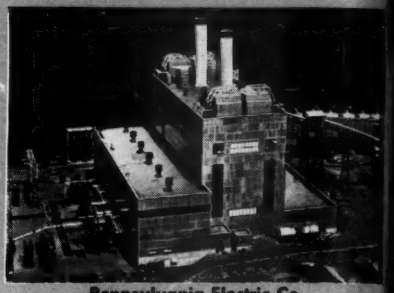
New England Electric System
South Street — Providence, R. I.

New Orleans Public Service Inc.
A. B. Paterson — New Orleans, La.

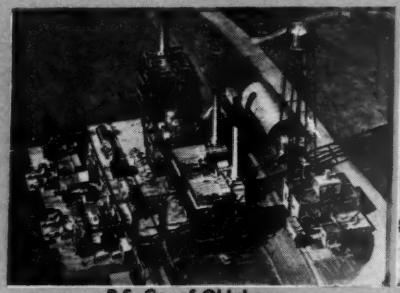
Orlando Utilities Commission
Orlando — Orlando, Fla.



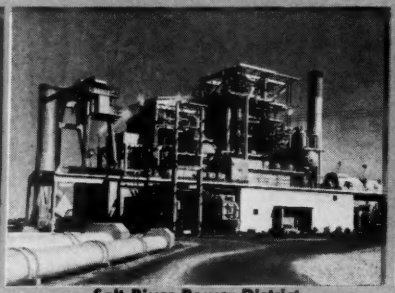
Pacific Gas & Electric Co.
Pittsburg — Pittsburg, Calif.



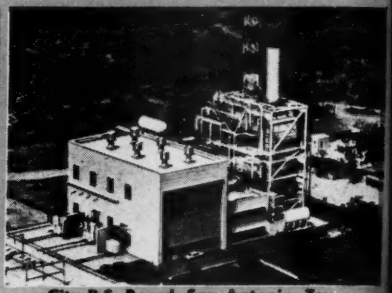
Pennsylvania Electric Co.
Shawville — Shawville, Pa.



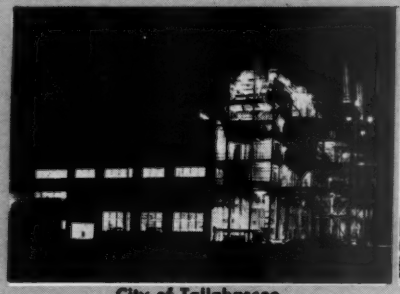
P.S. Co. of Oklahoma
Southwestern — Washita, Okla.



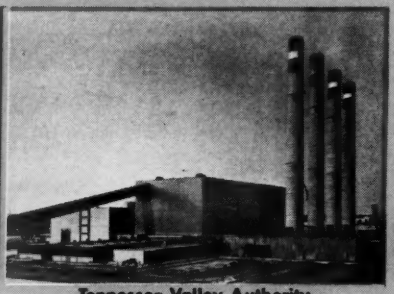
Salt River Power District
Kyrene — Tempe, Ariz.



City P.S. Board, San Antonio, Tex.
Northside — San Antonio, Tex.

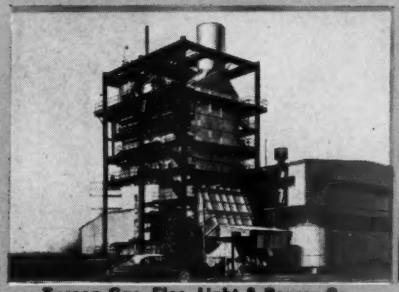


City of Tallahassee
St. Mark's — Tallahassee, Fla.



Tennessee Valley Authority
Colbert — Tuscumbia, Ala.

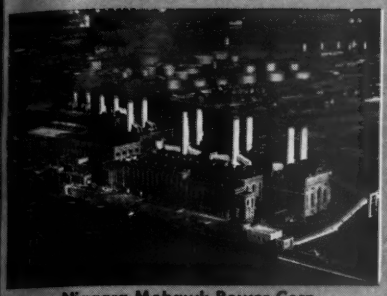
Tennessee Valley Authority
Shawnee — Childs, Ky.



Tucson Gas, Elec. Light & Power Co.
De Moss Petrie — Tucson, Ariz.

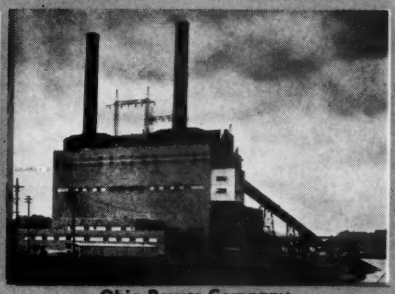
West Penn Power Co.
Springdale — Springdale, Pa.

Wisconsin Power & Light Co.
Rock River — North Beloit, Wis.

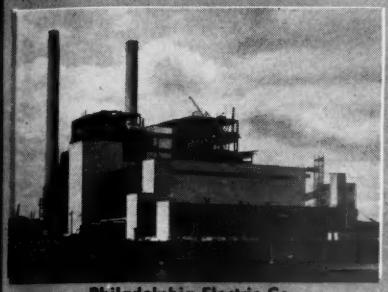


Niagara Mohawk Power Corp.
Huntley — Buffalo, N. Y.

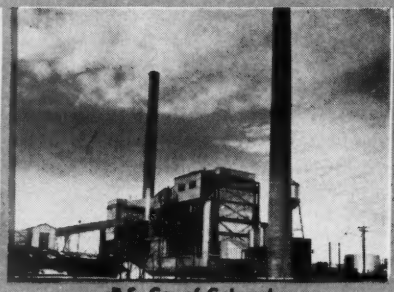
Ohio Edison Co.
Niles — Niles, Ohio



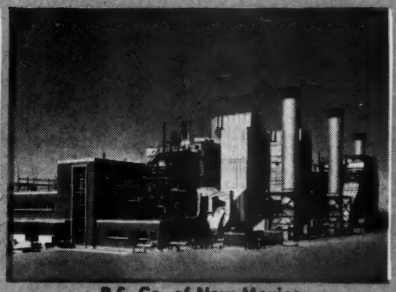
Ohio Power Company
Muskingum River — Beverly, Ohio



Philadelphia Electric Co.
Cromby — Phoenixville, Pa.



P.S. Co. of Colorado
Zuni — Denver, Colo.



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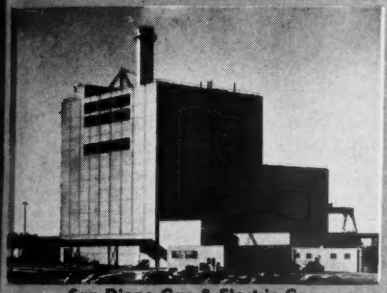
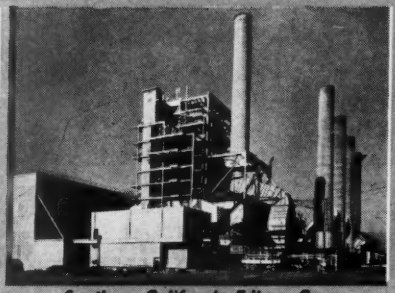
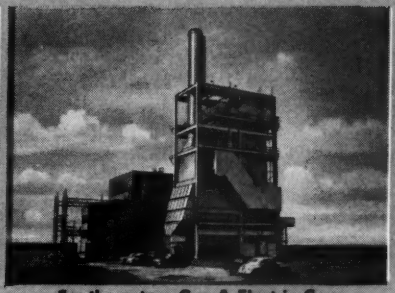
Person — Albuquerque, N. Mex.



San Diego Gas & Electric Co.
Encina — Carlsbad, Calif.

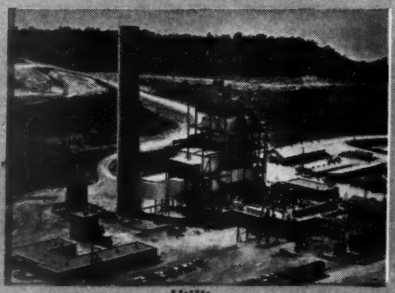


Southern California Edison Co.
Redondo Beach — Redondo Beach, Calif.

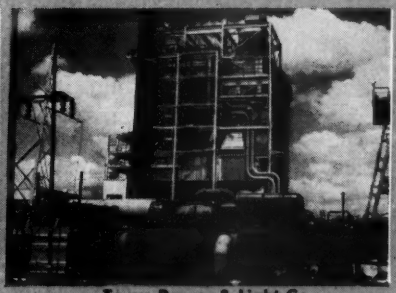


Southwestern Gas & Electric Co.
Lone Star — Morris County, Tex.

Tennessee Valley Authority
Widow's Creek — Bridgeport, Ala.



Utility
Southwestern United States



Texas Power & Light Co.
Rivercrest — Red River County, Tex.

Wisconsin Public Service Corp.
Weston — Rothschild, Wis.

A continuing B&W program of intensive research and development in combustion and steam generation, with the cooperation of the Nation's electric companies, has made possible many major advances resulting in more efficient production of electricity. B&W Units installed during 1954 represent an important part of the contribution toward lower cost power.

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BOILER DIVISION

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Pages with the Editors

PUBLIC utility regulation is not very old when compared with other branches of the law. Even to those scholars who trace it back to British law of three centuries ago when Lord Chief Justice Hale made his famous pronouncement (in *De Portibus Maris*) concerning property or business "clothed with a public interest," regulation is still a rather junior specialty of practice. Modern American regulation is generally counted as having had its practical start with the Munn decision of the U. S. Supreme Court in 1877 and its more rapid development since the full-powered commission laws, which began in New York and Wisconsin in 1907.

IT is interesting, therefore, to note, in an up-to-the-minute and well-prepared commission opinion dealing with a very contemporaneous problem in rate making and rate case litigation, a reference to a rather rare legal principle which goes back to the common law of England. It was in the recent decision of the Florida Railroad and Public Utilities Commission dismissing certain ostensible complaints against the Florida Power & Light Company that we noted the characterization of contracts leading up to these complaints as being "champertous" and "barratrous."

WHILE both of these rather ancient English legal terms are somewhat allied, we understand that "barratry" (as it was outlawed by a British statute of 1726) was a misdemeanor involving the inciting or stirring up of quarrels—resulting in the disturbance of the peace and the abuse of legal process by unnecessary litigation. "Champerty," on the other hand, was a vicious defect in a contract—whereby parties to a suit attempted to finance the prosecution of such litigation by outside parties having no other interest in them except in sharing the proceeds. A champertous contract or bargain was not only illegal and unenforceable, but parties to it were also punishable at common law.

JOHN P. THOMPSON

THE application of these early principles to the prosecution of a modern rate complaint by the Florida commission, while somewhat quaint, was nevertheless very much to the point, under the circumstances cited in the Florida Power & Light Case. There, an out-of-state organization, professionally engaged in the "analysis" of public utility customer rates, had succeeded in lining up a number of "complaints" on a contingent fee basis, whereby its services would be compensated out of refunds or "savings," or both.

THE Florida case is not the first time the state commissions have had to deal with professional rate case agitation, and it probably won't be the last. But this forthright opinion, as noted in our "Progress of Regulation" department (see page 207), shows what can happen when a commission, as well as the regulated utility involved, exercises extraordinary vigilance to see that the public interest is protected, without utility customers having to pay unnecessary tribute for the dispensation of regulatory justice to which they are entitled by law without charge.

* * * *

WE have read from time to time in the past issues of this publication, articles by veteran federal and state public

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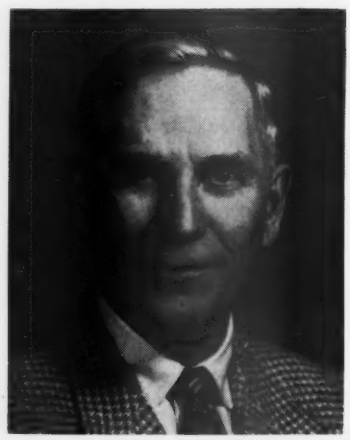
utility commissioners dealing with their experiences and problems as regulators. As a variety we present, for our opening feature in this issue, an article about the job of a state public utility commissioner, viewed from the eyes of a young man relatively new in the field. JOHN P. THOMPSON, Denver lawyer and a graduate in economics at George Washington University (Washington, D. C.) in 1942, was appointed to the Colorado Public Utilities Commission less than a year ago. He is now only thirty-five years of age, but his article on the commissioner's job as he sees it will be refreshing to both older colleagues and regulated utility people. COMMISSIONER THOMPSON served as a Marine Corps pilot during World War II and was engaged in private practice at the Denver bar from 1950 to 1954.

* * * *

AT this writing a number of bills are before the Congress of the United States, to change in varying degree the extent of jurisdiction which the U. S. Supreme Court has ruled that the Federal Power Commission should exercise over independent producers and gatherers of natural gas. Beginning on page 157, WILLIAM M. WHERRY, well-known veteran New York attorney in utility practice, has examined the basic question of whether the attempted exemption of such producers from FPC control, in whole or in part, is practical or desirable and whether, on the other hand, a practical and desirable form of jurisdiction can be exercised by the FPC in the public interest.



JAMES W. MARTIN

MR. WHERRY was born at West Point, son of a Brigadier General. He was educated at the University of Michigan (BS, '98) and studied law at the University of Cincinnati and Columbia University. He was admitted to the New York bar in 1900 and is a member of the New York city firm of Wherry & Weadock. He has lectured on public utilities at New York University, and is the author of the book *Public Utilities and the Law* (second edition).

* * * *

AS a variation from the classical controversy over valuing public utility properties on the basis of either original cost depreciated or reproduction cost depreciated, the article beginning on page 161 outlines an interesting approach. The author, JAMES W. MARTIN, director of the bureau of business research, college of commerce, University of Kentucky, states at the outset that the technique he outlines is for purposes of estimating market value or tax assessment—not for finding a rate base. Market values, of course, are required for pricing when title is transferred, for description of securities when property is pledged, for the determination of fair compensation on condemnation, for the estimation of the soundness of a property use program, and for the appraisal of property for taxes.

PROFESSOR MARTIN was born in Muskogee, Oklahoma, and taught school in Texas. He graduated from East Texas State College (AB, '21) and the George Peabody College in Nashville, Tennessee (MA, '21). He also did graduate work at Vanderbilt University and the University of Chicago. He has since taught at Northwestern University, Emory University, and the University of Chicago. He joined the University of Kentucky faculty in 1928 as professor of economics and director of the school's bureau of business research, and has continued to hold both positions since that time.

THE next number of this magazine will be out August 18th.

The Editors

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SANTEE-COOPER AUTHORITY INVESTIGATION

Both supporters and critics of publicly owned power operations, and a good segment of the general public, were surprised last year by the news that South Carolina's celebrated experiment in state-owned power production was in serious financial difficulty. The announcement came from the then retiring governor of the state, James F. Byrnes, who called for a legislative investigation of the affairs of the South Carolina Public Service Authority, popularly known as the Santee-Cooper project. Since then, a broad investigation has been authorized by the South Carolina general assembly and a special joint committee of legislators and laymen has been formed to report to the next meeting of the legislature in January, 1956. W. D. Workman, Jr., South Carolina newspaper correspondent, has written an interesting report on the background and progress of this investigation, which may have widespread repercussions on the future direction of public power development in the Southeast and elsewhere.

ZONING AND THE UTILITIES

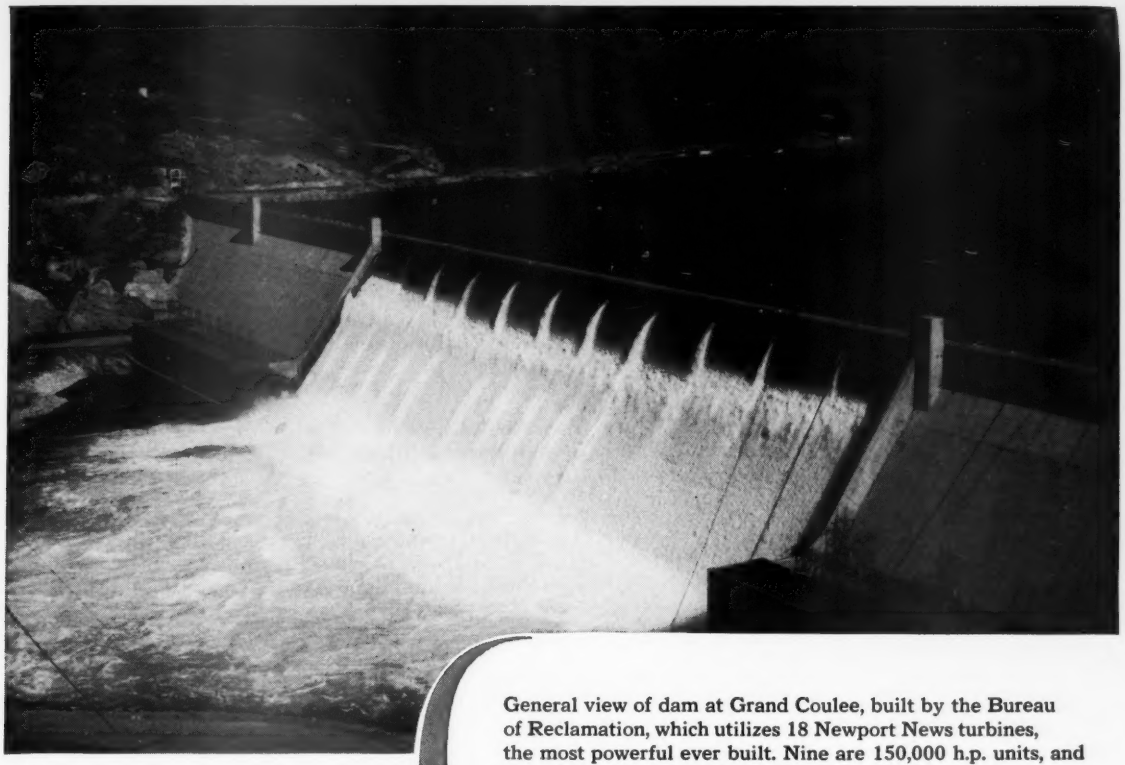
Recently the governor of Ohio exercised his veto authority to kill a bill passed by the Ohio legislature which would have taken from regional planning boards the right to interfere with the routing or building of public utility lines and other facilities. The passage of the measure grew out of a state supreme court decision upholding the right of a county planning commission to deny a power company permission to run a power line across a certain area. But back of this incident is a controversial general problem of balancing the rights of the local community to plan or zone industrial structures, as compared with the rights of the entire state population or region to efficient and economical public service. There recently appeared in this magazine an article stressing the importance of utility operations from the utility point of view. Here is an article by George D. Haller, professor, Detroit College of Law, which explores the viewpoint of local community interests with respect to proper planning.

THE PEDAGOGUE FINDS A PHONE BILLET

Several years ago an enterprising Baltimore educator took up with his local telephone company the problem of teaching children the proper use of the telephone. He complained that businessmen hiring his school graduates were a bit unhappy over the fact that the young people had not been taught good manners and good usage of the most essential link of modern business communication—the telephone. The company soon found that the problem was by no means confined to schoolchildren or business school graduates. There developed, as a result, a new course, complete with specialized textbooks, pedagogy, and working classroom models. James H. Collins, professional writer of California, tells us the fascinating story of why this interesting form of instruction came about, how it works, and how it is being more widely used as an instrument of modern education.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***



General view of dam at Grand Coulee, built by the Bureau of Reclamation, which utilizes 18 Newport News turbines, the most powerful ever built. Nine are 150,000 h.p. units, and the other nine are rated at 165,000 h.p. each.

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Typical Users of Newport News Equipment

PLANT	LOCATION
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Fort Patrick Henry	Tennessee
Hiwassee	Tennessee
Hoover	Nevada
J. H. Kerr	Virginia
Jim Woodruff	Florida
Lower Salmon	Idaho
Norris	Tennessee
Rock Creek	California
Santee-Cooper	South Carolina
C. J. Strike	Idaho
Whitney	Texas
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Turbines designed and built for the world's largest development at Grand Coulee... and for other hydroelectric installations in America and various parts of the world... bespeak the skill and facilities offered by Newport News.

This trained organization has filled hydroelectric turbine contracts with an aggregate rated output of 7,000,000 horsepower.

Other equipment designed and built by Newport News includes penstocks, pressure regulators, valves, pumps, gates and rack rakes. Upon request, a copy of our illustrated booklet entitled "WATER POWER EQUIPMENT" will be sent to you.

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HAROLD W. DODDS
President, Princeton University.

"The danger today is not so much that the world will force you to conform but that you will want to conform."

CLARENCE B. RANDALL
Chairman of the board, Inland Steel Company.

"I look forward to the day, when young men between the ages of thirty and forty will serve their government for two years."

HOMER FERGUSON
Former U. S. Senator from Michigan.

"The battle against the appalling waste and inefficiency disclosed in the Hoover Commission reports will be won through the leadership of such groups as businessmen."

GORDON DEAN
Former chairman, United States Atomic Energy Commission.

"We are simply not implementing the President's 'atom for peace' proposal . . . If we do not soon change our policy and take the secrecy wraps completely off these power reactors, our pretension that we are spreading blessings will have a very hollow ring."

ROGER M. BLOUGH
Chairman of the board, United States Steel Corporation.

"[Research] offers the only road to finding out how to produce more and better goods cheaper, and finding out how to produce more and better goods cheaper is the proven way of guaranteeing more and better jobs—and wages—contractual devices to the contrary notwithstanding."

HERBERT HOOVER
Former President of the United States.

"It was clear from the beginning that we would have to step on a lot of toes. Whenever you scrutinize government functions you run up against people with a stake in things as they are. But that did not deter us. We had a job to do, and the only instructions I gave the task forces were: 'Come in with all the facts and the truth of the situation.'"

HENRY G. RITER
President, National Association of Manufacturers.

"[If the guaranteed annual wage becomes a reality], we would have union bosses and the government sitting in with management to decide what goods will be produced—where and in what quantity, quality, and style and at what price and by whom. If Reuther gets his full guaranteed wage, this country will be in such a state you won't know it from Socialism."

HAROLD QUINTON
President, Southern California Edison Company.

"It is never an easy and generally a thankless task to revise statutes which afford special benefits to a certain privileged class. But electric utility companies serve some 40,000,000 customers, or about 80 per cent of the total number for the nation, and are duty bound to strive to obtain the enactment of laws that are fair to the customers' present interests and that safeguard their future interests as well."

Here's Proof of Performance...

Pressure-creosoting increases pole life for Consumers Power Company

• In 1931, Consumers Power Company, serving 64 Michigan counties, stopped the use of untreated and butt-treated poles in its rural distribution systems in favor of pressure-creosoted poles. Today approximately two-thirds of the company's poles in electric distribution lines are pressure treated, 80% of those being full length pressure-creosoted Southern Yellow Pine.

The average cedar pole, used until 1931, had a normal life expectancy of 23 to 25 years at the most. The life expectancy excluding losses for other than natural causes, of the pressure-creosoted Southern Yellow Pine poles being purchased today is probably upwards of 40 years, according to George A. Clark, Electric Distribution Supervisor.

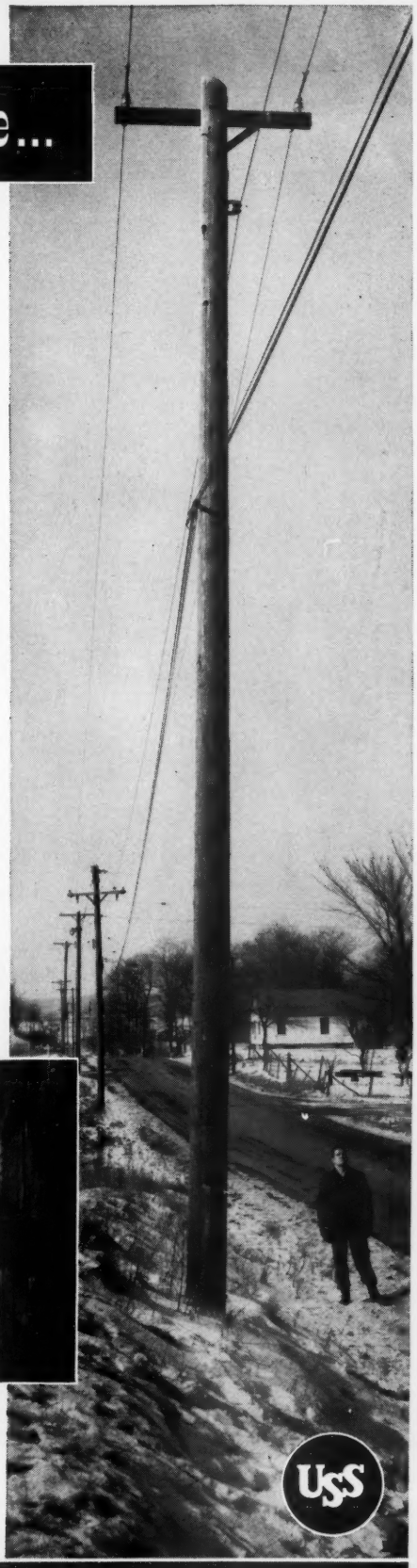
Pressure-creosoting, according to Mr. Clark, gives positive penetration averaging over 80% of the sapwood and with the use of modern vacuum processes after treatment, today's poles are dryer and cleaner.

In the company's scheduled maintenance program, its full-length pressure-treated poles are not to be given a boring inspection until they have been in service 25 years.

Long life and cleanliness go hand in hand when you use pressure-creosoted poles. Especially if USS Creosote is used. If you would like more information, contact the nearest Coal Chemical sales office listed below or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

You can obtain clean pressure-creosoted poles upon specification without sacrificing pole service life.

Close-up, at right, of a Consumers Power Pole, showing 1937 dating nail.



Pressure-creosoted poles in a rural line of Consumers Power Company, Jackson, Mich.

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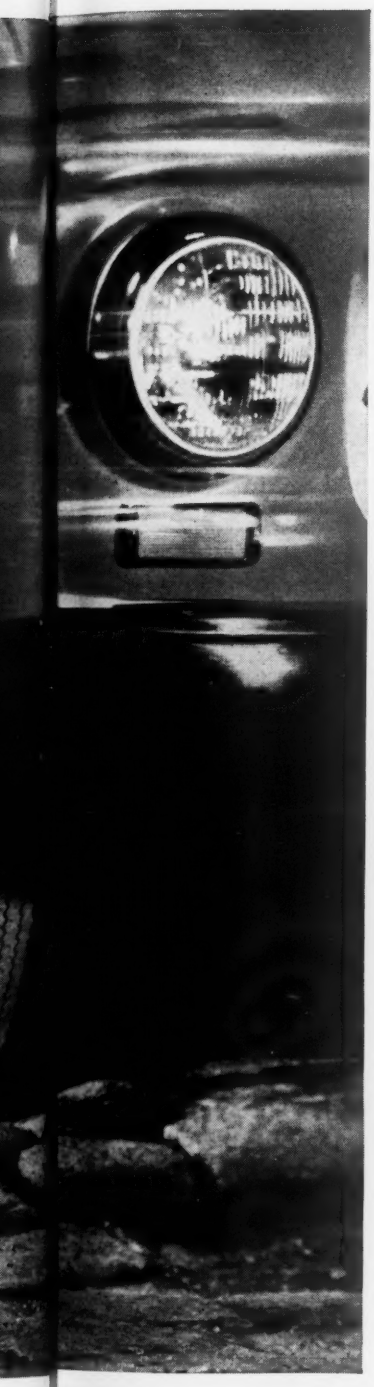

Here's a beating your truck will never have to take. This INTERNATIONAL Truck is pounding over the Belgian Block course — a torture track so bumpy that, at only 12 miles per hour, the wheels slam up and down 1,400 times a minute. It is so rugged that a new driver takes over after each 20 miles of the 400-mile test.

We torture INTERNATIONAL Trucks this way to be sure that the sheet metal, cabs, springs, and all running parts will stand up *longer* under the worst kind of punishment. So that our trucks will have utmost roadability, minimum wheel fight, maximum comfort. It's all a part of INTERNATIONAL *all-truck* engineering and design to save you the BIG money — the operating and upkeep money.

INTERNATIONAL engineers are never called on to adapt passenger car engines or components to truck use. As a result, every INTERNATIONAL is built with extra margins of strength to save you the BIG money in the long run.

Proof of these savings comes from the cost records of operators who have made INTERNATIONAL the heavy-duty sales leader for 23 straight years. And the same engineering that piled up this record stands solidly behind *every* INTERNATIONAL model.

Yet with this extra value, INTERNATIONAL Trucks are often priced as low, and sometimes lower than comparable models of other makes. Before you buy any truck, let your INTERNATIONAL Dealer show you the right INTERNATIONAL for you — *all-truck built to save you the BIG money!*

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You save the BIG money in utility service hauling with all-truck built INTERNATIONALS. 9 light-duty models with Service-Utility body, 2 four-wheel-drive models and 9 medium-duty chassis to 16,000 lbs. GVW. Axle and transmission ratios for every need.

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All-Truck Built to save you the BIG money!

Our new five-day financial seminars...

have been designed to acquaint selected utility officials with the inner workings of New York's financial community.

These seminars are made possible through the help of many financial specialists who give a firsthand account of their particular operations.

In addition, our well-known Public Utilities Round Tables will continue as in former years.

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ARE YOU SECTIONALIZING YOUR FEEDERS AT

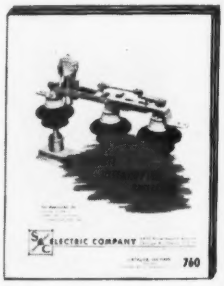
Now the simpler operating methods possible with S&C Load Interrupters can save equipment costs at sectionalizing points by almost one half.

S&C Load Interrupters can switch the circuit *without any external arcing.*

This means you can now use stick operation at many points where the present practice is group operation . . . group operation perhaps for the single purpose of actuating disconnects or horn-gaps when mounted upright at pole-top locations to give the necessary clearances for their rising arcs.

With the stick-operated* Load Interrupter, you actually save three ways: (1) No costly operating mechanism and pole-top frame to purchase; (2) Installation labor radically lowered; (3) Maintenance and adjustment costs reduced to a minimum.

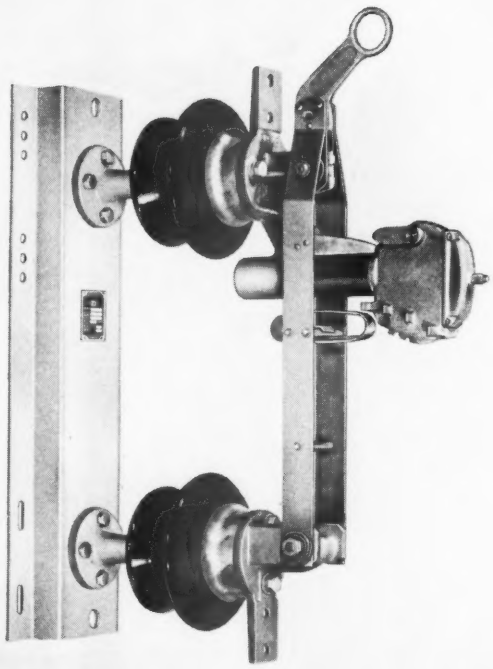
Of course this cost-saving is just part of the story. Since the Load Interrupter can switch the circuit under any condition except short circuit, it permits completely new practices in switching distribution feeders.



**However, S&C Load Interrupters may also be obtained for group operation.*

Would you like to read more about the S&C Load Interrupter and how it saves money while improving operating practices? Write today for Catalog Section 760.

DISTRIBUTION LOWEST COST?



Inverted Interrupters are readily accessible for operation with a hook stick.

Single-pole Load Interrupters for vertical mounting—14.4 kv 600 amp.

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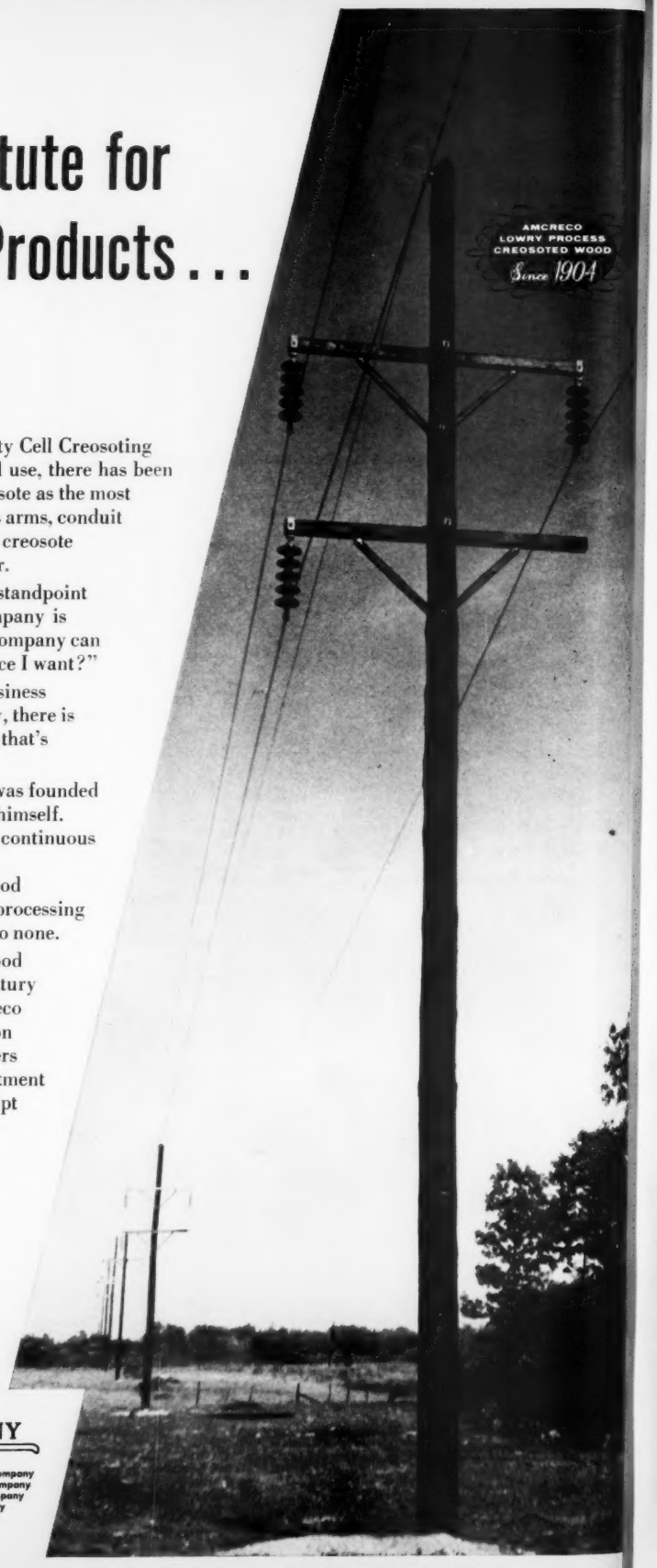

Ever since 1905, when the Lowry Empty Cell Creosoting Process was introduced for commercial use, there has been no question as to the supremacy of creosote as the most effective wood preservative. Poles, cross arms, conduit and other construction woods treated in creosote have proved their value many times over.

The only question from the buyer's standpoint might be, "What wood preserving company is set up to do the best job for me? What company can give me the quality of product and service I want?"

For those of you who have done business with the American Creosoting Company, there is only one answer to that question — and that's the American Creosoting Company.

The American Creosoting Company was founded over fifty years ago by inventor Lowry, himself. And during the course of time, through continuous research and development, plus strict adherence to the basic principles of wood preservation, Amcreco has developed a processing and service organization that is second to none.

For your future supplies of treated wood products, take advantage of our half-century of experience. Write your nearby Amcreco sales office for estimates or quotations on treated poles, cross arms, conduit, timbers and other construction woods. Our treatment plants are conveniently located for prompt domestic or export shipment.

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AUGUST

Thursday—4 *Stanford Research Institute will hold symposium on electronics in automatic production, San Francisco, Cal. Aug. 22, 23.* ***Advance notice.***	**Friday—5** *National Shade Tree Conference ends, Santa Barbara, Cal.*	**Saturday—6** *American Bar Association will hold annual meeting, Philadelphia, Pa. Aug. 22-26.* ***Advance notice.***	**Sunday—7** *West Coast Electronic Manufacturers Association will hold show, San Francisco, Cal. Aug. 24-26.* ***Advance notice.***
Monday—8 *Appalachian Gas Measurement Short Course will be held, Morgantown, W. Va. Aug. 29-31.* ***Advance notice.***	**Tuesday—9** *American Water Works Association, New York Section, will hold annual meeting, Saranac, N. Y. Sept. 7-9.* ***Advance notice.***	**Wednesday—10** *Mid-West Gas Association will hold gas school and conference, Ames, Iowa. Sept. 7-9.* ***Advance notice.***	**Thursday—11** *Southeastern Electric Exchange, Personnel Administration Section, begins meeting, Roanoke, Va.*
Friday—12 *Michigan Independent Telephone Association will hold annual convention, Grand Rapids, Mich. Sept. 8, 9.* ***Advance notice.***	**Saturday—13** *New Jersey Gas Association will hold one-day meeting, Spring Lake, N. J. Sept. 9.* ***Advance notice.***	**Sunday—14** *National Association of Educational Broadcasters begins television production workshop, Iowa City, Iowa.*	**Monday—15** *Southeastern Gas Association begins short course in gas technology, Raleigh, N. C.*
Tuesday—16 *Independent Natural Gas Association of America will hold annual meeting, Jasper National Park, Jasper, Alberta, Canada. Sept. 11-13.* ***Advance notice.***	**Wednesday—17** *Rocky Mountain Electrical League will hold annual convention, Jackson Hole, Wyo. Sept. 11-14.* ***Advance notice.***	**Thursday—18** *Society of American Military Engineers begins western regional convention, Seattle, Wash.*	**Friday—19** *American Institute of Electrical Engineers ends 5-day Pacific general meeting, Butte, Mont.*

Courtesy, Pennsylvania Power & Light Company

Modern Steam Plant in the Delaware Valley

The Martins Creek power plant in the foothills of the Pocono mountains.

Public Utilities
FORTNIGHTLY

VOL. 56, NO. 3 AUGUST 4, 1955

The Life Cycle of a Regulatory Commissioner

This is an article about the job of a state public utility commissioner, viewed from the eyes of a young man relatively new in the field. Approaching a complex and specialized field with a limited knowledge and experience, the author nevertheless realizes that his decisions, right or wrong, must be his own—decisions he can live with.

BY THE HONORABLE JOHN P. THOMPSON*
MEMBER, COLORADO PUBLIC UTILITIES COMMISSION

IT may be refreshing to the regulatory commissioner who has been in office long enough to be considered an old pro, and to utility management, harassed with problems which a regulatory commission only seems to multiply, to look at this whole thing through the eyes of a youngster, new in the field. Not that he can tell them anything they do not already know; what he says may even be distorted in some respects, due to this inexperience; but in evaluating the ideas of others, we sometimes make an association of things we already knew, in a way that we had not done before.

With this thought in mind, I decided to accept the risk of ridicule by exposing my ignorance, when I might stay silent and appear fairly wise, in the hope that others might find profit, not in what I might say, but as a result of their own thinking resulting from what I say.

*For additional personal note, see "Pages with the Editors."

The Colorado commission consists of three commissioners, appointed by the governor, subject to state senate approval, for staggered 6-year terms. Our statutes draw together virtually all the threads in the regulatory field: natural gas, electric, telephone, domestic water, rail, air, bus, truck, taxi, transit, and sight-seeing activities. The Colorado commission regulates the rates, services, and facilities of utilities and carriers generally; issuance of securities by natural gas and electric companies; and reserves the right to disapprove encumbrances of motor carrier certificates and permits.

Generally speaking, it does not have supervision of REA plants, nor of municipally owned utilities, although it does have jurisdiction of privately owned utilities in home-rule cities. It is therefore in the center of the stream of commerce, for it regulates virtually all utility and carrier activities within the state, including private or contract carriers.

We are also separable from other regulatory commissions, as being a western commission. Tucked away in the back of our minds, we all have a picture which we can conjure up at will, of the Great American desert, of stark and majestic mountains, rushing streams, magnificent forests, yawning gorges, and endless stretches of treeless plains shimmering in the sun. It is not often, however, that we apply these visions in terms of what it means to get delivery of materials required to build a huge dam fifty miles from the nearest railhead; what it means to transport water for drinking—the very essential of life—for hundreds of miles; to string telephone line or natural gas pipeline across burning desert upon which hundreds of men have literally died of heat prostration and thirst, or through dense forest, up over those cruel rocks which appear so majestic. Nor when we drive mile upon endless mile from village to sun-drenched hamlet, do we think of what those tedious vacant, customerless miles mean, in terms of invested capital in power and telephone lines, natural gas pipeline, and costs of operating rail and truck lines through unproductive territory. Where in the East and Middle West, huge semitrailers rumble heel and toe through the larger cities, in many places in the West a single small bobtail truck bounces down a long, lonely highway. Smaller population centers, and greater distances between them, raise many problems unique to the West.

Yet the population growth of the West since World War II is astonishing. The population of the Denver metropolitan area alone has grown from perhaps 300,000 to its present 700,000; Denver has a net growth in population of approximately 2,300 every month; Denver's striking new airport is the sixth most active in the whole country. Denver is now a major city, requiring—and getting—utility and carrier services which are among the finest in the country. Colorado Springs felt growing pains even before it was selected as the site of the new Air Force Academy. Year after year, out here, the electric, natural gas, and telephone utilities have added new plant to serve this growth, often doubling their plant every five years. But in many areas of the West, the gorges are still being spanned, the mountains are still being crossed, and the water of the streams is being diverted and carried through aqueducts that even the westerner,

accustomed to big things, is proud to show to visitors.

In this setting, a young man is appointed to a public utilities commission. He knows that his knowledge and judgment in this new field are very limited; he recognizes the opportunity to help his country grow; he would never knowingly contribute to any act which might stunt the growth of his beloved West. What he wants to know is what, of the things he can do, will contribute most to his community, his state, and his nation.

Here, we enter the cycle.

IT is not enough to say "leave it to utility management and the financial experts, and it will grow by itself." The public has insisted upon regulation of utilities. The law he has sworn to uphold requires it. He knows, too, that public confidence in regulatory bodies is a bulwark against Socialism; that the very existence of privately owned utilities depends upon the confidence the public has in its regulatory commissions; our new commissioner realizes that he *must* regulate, so that private industry will be permitted to continue to accomplish miraculous changes like those of the past few years, out here. He may approach it gingerly, but he must certainly approach and take hold, in the interest of both the public and the utility investor. He therefore begins to try this and that, to see how this thing works.

He learns very quickly that if a utility is granted a rate increase, the public does not like it. Period. The public is not interested in the problems of the utilities, and especially not if those problems mean higher rates. It is one thing to show a visitor a magnificent aqueduct, or a huge new electric plant, throbbing with energy; quite another, to consider where the money must come from to pay for it; or how much that plant cost, compared to an older, grimier plant that is not worth showing to the visitor. So when our new commissioner mentions to his friends some of the problems of the utilities, he is checked off by them as being in the utilities' pocket.

HE also learns that although he is duty bound to exercise his best judgment —admittedly limited—nevertheless, if in the exercise of it, he arrives at any answer different from that arrived at by utility management, his reputation for good judgment may be in jeopardy.

He is now in the utilities' pocket, and

¶ "THERE *are no courses which a regulatory commissioner can study, to avoid some of the hard knocks and arrive more quickly at a level of competence. He must select his own study material and ask his own questions. He finds that each subject of regulation is like a dark room in a house; each is separate and distinct, with its own special language, its individual historical development (which affects anything which is being considered today), and its own unique problems; the new commissioner must explore them one by one, prodding here and there to determine their outlines.*"

antiutility, depending upon who is talking about him.

He also learns that his job is really quite easy. To the railroader with whom he is talking, railroad regulation alone is complicated and touchy. To him, the matter of setting rates for an electric utility seems to be painfully unimportant; surely that must be a mechanical operation. To the natural gas utility, the truckers have no problems but petty ones; it is the natural gas industry which is the backbone of the nation. To your friends in the general public, it seems that surely all there is to it is stamping "approved" on every utility application, with a big rubber stamp. Certainly it cannot involve any intelligence or work; after all, thinks the public, it *is* a political job! And so on. A person can get quite a reputation as a comedian, just by saying that the utilities and carriers are the very nerve system of our existence, and that all of them are terribly important to us, when we get right down to it.

Our new commissioner is in a kind of limbo. The public and utility management are each prone to think that he is the pawn of the other. If he works carefully, he is often between the extremes sought by the two, and is therefore criticized by both.

IN this wide ocean, he finds himself all alone, except for two other pieces of flotsam, his fellow commissioners. Even they have the advantage of him; they have made their adjustments to this life. He hasn't. He has to learn as they did, by being cuffed about.

There are no courses which a regulatory commissioner can study, to avoid some of the hard knocks and arrive more quickly at a level of competence. He must select his own study material and ask his own questions. He finds that each subject of regulation is like a dark room in a house; each is separate and distinct, with its own special language, its individual historical development (which affects anything which is being considered today), and its own unique problems; the new commissioner must explore them one by one, prodding here and there to determine their outlines. Yet they are all under one roof, in a sense. They all belong to a common structure.

The first phase of the cycle is concluded. Our new commissioner has tinkered with this thing and that, and observed the result, sometimes painfully. He has learned that no matter what decision he makes on an important matter, he will be criticized. I do not suppose any of us relishes criticism. He has finally learned that whatever decision he makes, right or wrong, it must be one that *he* can live with, so that the criticism which is sure to come will not cut quite so deeply. He has learned that he alone must make his decisions on the basis of his knowledge, his experience, and his understanding of the law and facts of the case. True, he can ask questions. The capable, experienced staff, and his fellow commissioners want to help, to whatever degree they can without giving offense. And thank heaven for fellow commissioners who are not motivated by any consideration except what they honestly and fairly believe is right. But our new commissioner, when the final decision is to be made, realizes that he alone must make it.

THIS starts him on the second phase of the cycle. He begins an active, directed program of study, work, and questioning, so that he can make these decisions as well as he can, so that he can be as secure in

Who Said the Middle Is the Safest?

"THE public is not interested in the problems of the utilities, and especially not if those problems mean higher rates. It is one thing to show a visitor a magnificent aqueduct, or a huge new electric plant, throbbing with energy; quite another, to consider where the money must come from to pay for it; or how much that plant cost, compared to an older, grimier plant that is not worth showing to the visitor. So when our new commissioner mentions to his friends some of the problems of the utilities, he is checked off by them as being in the utilities' pocket."

them as circumstances will permit. This is a period of self-analysis and self-discipline. No one knows better than a man himself what he is leaving unstudied and undone; where the gaps in his knowledge are. He wants to profit by the wisdom of others; he commences to study. At this stage, how he does appreciate a well-written, well-reasoned decision! In a driving program of concentrated reading, he pores over the statutes, the court cases, the decisions of his own and other commissions, the legal texts, the law journals, the trade journals, and, of course, PUBLIC UTILITIES FORTNIGHTLY. Formerly, he felt most keenly his insufficiency of knowledge; now it is an insufficiency of time.

This program of study may even tend to separate him from some older fellow commissioners. They may not have read these things for years. But they are not really keen to get into a disadvantageous position, sometimes embarrassing, of trying to trace out the details of a principle of regulation with a person who has just studied it. Besides, the older commission-

ers have dragged back and forth across these ideas so long that many of them are second nature. They have been deposited in the recesses at the rear of the brain, where they have become part of instinct.

The more he learns, the less able he is to have exploratory conferences with his fellow commissioners; the more isolated he becomes. He must be very careful, now, or his compadres on the commission will begin to suspect him of being a know-it-all. If he is not careful, he will lose his perspective right here.

THEN one day he enters the final phase of the cycle. It suddenly strikes him that most of what he has been studying tells him what he *can* do, within the law, or cannot do. It does not tell him the thing he wants most to know: what he *should* do, properly to fulfill his obligation as a utility regulator and help his section of the country become an even more wonderful place to live.

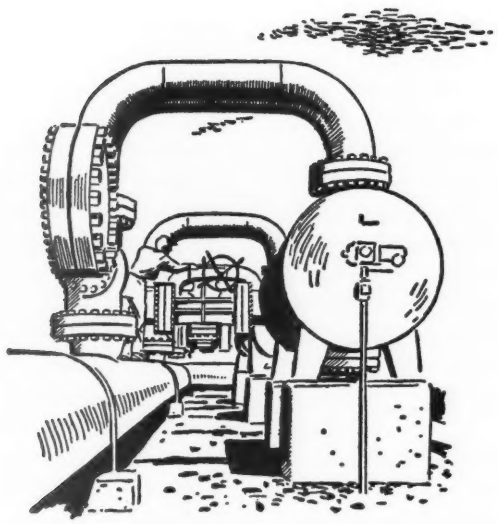
He is now beginning to understand the rationale of original cost, economic depreciation, load factor, operating ratio, energy and commodity charges, and the dozens of other terms which have a specific meaning not only as to what they are, but also as to where they fit in the scale of gradations of rate and other regulation. He begins for the first time to see how, as a cabinetmaker selects this tool and that for the particular job, so he must select this idea and that, as expressed by all these technical terms, to arrive at his objective —his end result, if you will. He has studied enough not only to recognize the tools, but to make a beginning towards using them efficiently. As he hears cases now, he mentally picks up each bit of testimony and inspects it all around, to determine where in the scale of gradations this properly goes, and what weight to give it. When he has carefully assayed each factor involved in each phase of the case, and given it appropriate weight, he has then arrived at a total result which is reasonable, and which will withstand any challenge. He studies and listens further. One day, he can be said to be fairly competent.

NOW, he can for the first time stand side by side with his fellow commissioners on an earned equal basis. But in his mental processes, he is now completely isolated from his friends of preregulation days, and from his family. This monster has become so complicated, and the considerations are so interrelated, that it is impossible now to have any social conversation on the subject. The new commissioner now sees in part, at least, why it was his fellow commissioners once seemed so unhelpful. One day, as our new commissioner sits in his easy chair at home he realizes that if anyone asks him what his work consists of, he really won't be able to give an answer that fairly describes it.

He is now a competent, capable regulatory commissioner. He understands the terminology of regulation; he is a careful student and a patient workman, turning out decisions which do him credit, and which fit appropriately into this field.

But again, one day, as he thinks a problem through, he suddenly realizes that for all the experience, all the study, all the hard work he has done, he still cannot say what, of the things he can do, will contribute most to his community, his state, and his nation.

He has come full circle.



Can Gas Production Be Regulated?

At this writing a number of bills are before the Congress of the United States, to change in varying degree the extent of jurisdiction which the U. S. Supreme Court has ruled that the Federal Power Commission should exercise over independent producers and gatherers of natural gas. The author of this article has examined the basic question of whether the attempted exemption of such producers from FPC control, in whole or in part, is practical or desirable or whether, on the other hand, a practical and desirable form of jurisdiction can be exercised by the FPC in the public interest.

By WILLIAM M. WHERRY*

THE decision in the Phillips Petroleum Company Case[1] filled the producers of natural gas with lamentation because they realized that the regulation of production and gathering had been accelerated by that decision.

When the Natural Gas Act was passed and the Federal Power Commission was given jurisdiction over transportation and sales in interstate commerce, it was clear that the provisions in § 1 attempting to exempt (1) local distribution and (2) production and gathering of natural gas from the regulation of the Federal Power Commission would give rise to much controversy and probably ultimately would be defeated. The fixing of the price of natural gas charged by pipeline companies would have to be passed on to the distributing companies and could not be controlled either by such distributing companies or by the local commissions regu-

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[1] Phillips Petroleum Co. *v.* Wisconsin (1954) 347 US 672, 3 PUR3d 129.

lating them. It was likewise inevitable that the prices which the pipeline companies should charge would be dependent on the cost to them of the gas which they received from the producers and the Federal Power Commission, sooner or later, would have to consider whether that cost was reasonable. Therefore, the regulation of pipeline companies by the Federal Power Commission would dominate both the distributors and the producers and gatherers of natural gas in so far as sales in interstate commerce were involved.

THE Phillips Petroleum decision hastened this regulation and made futile the hope that gatherers and producers of natural gas can escape regulation when that gas passes into interstate commerce. Experience demonstrates that regulation will evitably reach back to control of the prices charged by those gatherers and producers *ex post facto* whenever the regulatory body attempts to estimate the reasonableness of contracts by the infallible yardstick of hindsight instead of foresight. To repeal this decision and exempt from regulation the rates charged to pipeline companies for the gas they transmit and sell in interstate commerce is impossible and, in my opinion, undesirable.

We must, therefore, approach the problem from the point of view of what should be done to minimize the evils of such regulation. There are two things to be guarded against, not only from the point of view of distributing companies, but also from that of the producers, developers, and those investors supplying them with venture capital.

FIRST, no regulation should be hastily adopted which will deprive the distributing companies of natural gas which they have to sell to their customers since natural gas is at present essential to save the industry from the effect of destructive competition. It will do no good to the consumer to have the natural gas supply fail. Therefore, everything should be done from the standpoint of the consumer to facilitate the exploration and development of natural gas resources and the transportation and distribution to the ultimate consumer. On the other hand, those furnishing the venture capital and their fellow adventurers must realize that the price in the ultimate market will determine whether they get any reward or not for the risks they take. If they cannot sell to the ultimate consumer, it will do them no good to drill wells and develop facilities to discover, develop, and distribute natural gas.

THE second desideratum is to avoid the inevitable administrative lag which has become such a heavy burden on every regulated industry and to lessen the uncompensated losses caused by this lag, even if they cannot be eliminated altogether. The problem of amending the Natural Gas Act is simplified by keeping these two objectives in mind. First, the producer and his financial supporters must be encouraged to explore and produce natural gas and to deliver it for ultimate distribution in interstate commerce. To accomplish this it would seem wise to eliminate any requirement that certificates of public convenience and necessity should be secured before such producers and suppliers can explore and develop natural gas and build the facilities to deliver it to pipeline companies. If this requirement were eliminated the administrative lag at

that point could be reduced and accomplish tremendous savings.

The fact that any contracts or agreements made by the producers and suppliers would be subject to scrutiny and regulation wherever the gas passed in interstate commerce would tend to induce the gatherer and producer as well as the pipeline companies to make fair, reasonable, and just contracts so that they could be sure of selling the gas and therefore protecting their investors. As soon as a contract was made to deliver the gas to the pipeline company for transportation and sale in interstate commerce, the jurisdiction of the commission should attach and the terms and conditions should be subject to regulation.

ONE thing must be borne in mind which has been demonstrated by experience and that is that the greatest fallacy in regulation is the assumption that rates, terms, and conditions can be fixed for a definite period of time in spite of changes in conditions. It has too often been assumed that the public utility industry was static. For example, consider fixed-year franchises. These put a premium on bribery and encouraged deterioration of plant and distributing systems as well as service as the termination periods of such franchises approached. The management and officers of utility companies were glad to surrender their franchises for indeterminate permits which were valid so long as the utilities continued to render good service but were, nevertheless, subject to regulation.

It would be foolish today to attempt to substitute a contract with fixed rates, terms, and conditions at the outset of the entry of natural gas into interstate commerce instead of recognizing that any contracts made by public utilities are flexible and subject to regulation and modification of their terms to adjust them to changed conditions.

ANOTHER illustration of this fallacy is the arbitrary condemnation of all automatic adjustment clauses, regardless of the conditions which necessitated or brought about such agreements. Escalation clauses are absolutely essential for the protection and reward of owners of land when new fields have to be developed and a market found for the gas. Other illustrations of the flexible contract are open-ended mortgages, contracts, and leases providing for arbitration and renegotiation at fixed intervals. Even the very yardstick by which we measure values—that is to say the purchasing power of the dollar—changes in periods of inflation and deflation, and refusal to recognize these changes produces great injustices and hardships. We should not forget the tragedy which befell farmers who granted rights of way to railroads in consideration

¶ "THERE *are always opportunities for venture capitalists, explorers, and promoters to devise methods of minimizing the hazards produced by regulation. A regulatory commission which approaches its duties with the determination of fixing just, equitable, and reasonable conditions for such rates can be trusted to give due consideration to all interests . . .*"

of passes, only to find that years later the Supreme Court of the United States ruled there was an implied condition which subordinated their contracts to police power and destroyed the consideration they had acquired by arm's-length bargaining for giving up their property.

One must not forget that all the gentlemen adventurers were not gentlemen and those that took the greatest risks and suffered the greatest hardships did not usually reap the largest rewards.

THERE are always opportunities for venture capitalists, explorers, and promoters to devise methods of minimizing the hazards produced by regulation. A regulatory commission which approaches its duties with the determination of fixing just, equitable, and reasonable conditions for such rates can be trusted to give due consideration to all interests and effectively dispose of inequalities without laying the dead hand of regulation upon all enterprise, even though no commission has yet succeeded in devising a proper formula for adequately rewarding venture capital and those who are willing to take risks and render improved service. Continuous increases uncontrollable by distributing companies affect the stability of service, make planning for the future extremely difficult, not only for distributing companies and their customers, and ultimately will destroy large and important markets for the producers and gatherers of natural gas.

The problem confronting the commission is how to drive successfully a pony-giraffe team. The producer's service is a quality service and his return and that of his financial backing must be measured by the risk he takes. The distributors are more stabilized and can struggle along on a return figured by a mechanical formula for quantity production even on a base expressed in fictitious dollars of unrealistic purchasing power. The pipeline companies are more fortunate, since their costs were largely incurred in the inflationary period and their rate base is their own and not some aborigine's.

If the commission keeps constantly in mind the fact that it is valuing service and that each case presents features peculiar to it, the problem should not be too insoluble. The weakness of reproduction cost was due to claims for unreal speculative elements. The weakness of aboriginal cost is the fictitious medium of exchange in which it is expressed. The weakness of both is failure to measure fairly the intangible value of those who assume and carry the risk.

AMONG the standards which the Federal Power Commission should be required to take into account in determining when contracts by producers and gatherers are reasonable, should be (1) the effect which such contracts would have upon sale to the ultimate consumer in the particular distributors' market. This would include the question as to the justice of repeated and essential changes in rates and the fairness of escalation clauses. Other standards are (2) whether the price, when made, was fair and fairly arrived at; (3) the effect on the assurance of supply to the distributing market; and (4) the reasonableness of the provisions of the contract as they relate to existing or future producing and gathering market field prices.

Valuing Utilities via Stock and Debt Estimates

The technique outlined in this article is for purposes of estimating market value or tax assessment—not for finding a rate base. Nevertheless, it presents a new and unique instrument of valuation which might also be of interest, at least for comparative purposes, to those concerned with valuation of utility property for rate making.

By JAMES W. MARTIN*

THE appraiser who seeks to estimate the market value of a public service property as a whole may usually employ one or more of three approaches. Under some circumstances, he may look to the cost or some other piecemeal summation. In nearly all instances, he may capitalize a measure or several measures of anticipated receipts or of income or of both. If the securities of the corporation which operates the property are largely quoted on an open market, he may resort to a stock and debt total as one class of evidence of the amount for which the property owned would sell in a free market. The third attack is that with which this paper is concerned.[1]

In the valuation of public service property, direct comparisons with the sales of

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[1] The valuation problem here examined is concerned with the estimation of market value, not with finding a rate base. Market values are required for pricing when title is transferred, description of security when property is pledged to insure performance of an agreement, the determination of fair compensation, the estimation of the soundness of a property use program, the appraisal of property as a basis for taxation, and the determination of approximate facts incident to operation of property. Compare Frederick M. Babcock, *The Valuation of Real Estate* (McGraw-Hill, New York, New York, 1932), p. 161. Property tax assessment will be emphasized.

similar plants ordinarily cannot be drawn. This method of approaching appraisal, which is usual in the case of real estate valuation, must be modified in the instance of public service property appraisal. The comparable sales which are available in the latter instance, if any, are usually the sales of the securities and other liabilities of the owning corporation.

Basis of Valuation

In the instance of proprietorship[2] and funded debt, the stock market quotations may provide a value figure for most issues. To whatever extent in the instance of a large corporation the securities are not bought and sold on the open market, there is usually a possibility of estimating their value by methods which security traders characteristically employ. Moreover, the errors in the valuation of securities not regularly traded on stock exchanges or over the counter are not usually sufficient seriously to distort the estimate if they are debt items which represent a minor fraction of total stock and debt. In the instance of current liabilities, most of the transactions have taken place in the recent past, and so their amounts as shown on the books can reasonably be assumed to reflect current market values.

When all these data are totaled, the appraiser has an aggregation of stock and debt which for practical purposes should equal the value of all the assets of the corporation for the simple reason that all the assets are as valuable as all the liabilities. The equality can be stated in another way: If investors own all the stock and all the debt, they own all the equities in the corporate assets. Thus, the value of aggregate stock and debt is directly comparable with the value of the underlying assets viewed as a whole.[3]

In the case of an operating entity, whether owned by one or by several corporations, all the securities in the hands of investors must be totaled. That is, the stock and debt to be valued are all the stock and debt of the operating corporation, plus all those of subsidiary and leased corporations so far as the securities of related corporations are not owned by the operating corporation or by other corporations included in the unit and their value therefore represented in its securities or in their own. The stock and debt include equipment obligations. In most cases this definition of the stock and debt to be included will present no particular difficulty. In a few cases special adjustments must be made. The one case for special treatment which most frequently arises concerns the lessee corporation, only a part of the property of which the lessor operates. In all such exceptional cases, the adjustment needs to take account of the basic logic that all equities must be appraised in so far as direct quotations are lacking.

Another technical problem which the appraiser must solve concerns the method of employing the valuations of stock and debt. As already indicated, the spot value of accounts payable on the date as of which the valuation is made is the obvious value figure for these liabilities. And much can be said for using the spot quotations in the valuation of stock and funded

[2] Although surplus is a separate item on the corporate balance sheet, it is not separately valued for appraisal purposes as its value is presumably reflected in the price of stock.

[3] The explanation in this paragraph was a basis for the decision in State Railroad Cases (1875) 92 US 575, 605; but, in stating its conclusion, the court committed an unfortunate but understandable accounting error.

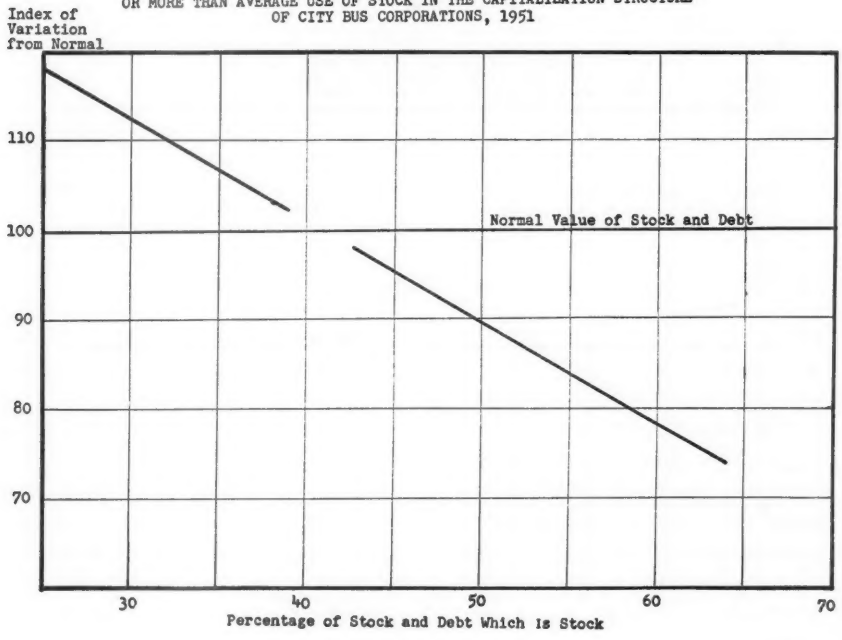
debt,[4] especially (a) when earlier quotations are not available, if the evidence at hand indicates little probability of significant fluctuation, (b) when prior quotations can be discovered or verified only with difficulty and when there is a *prima facie* case for assuming that fluctuations have been modest, and (c) in occasional other cases in which there is reason to believe the current quotations are generally about identical with those of earlier dates.

A PUBLIC service property valuation, however, may require a longer-run value idea than spot quotations take into account. It is frequently said that enough quotations must be examined to avoid a valuation largely based on a stock market upswing or downswing having a technical or speculative character. Occasionally, a one-year period of quotations is suggested; but this is not a sufficiently long period to eliminate overemphasis on a particular market flurry such as the extensive quotation device seeks to avoid. Ideally, what is needed is an examination of a long series of quotations—at least for a period of five or ten years—and a professional estimate as to the long-range value figures indicated by the quotations. Because the work can be done clerically and because the approximation is reasonably adequate, the suggested practice for stable corporations—as distinguished from those which are rapidly growing or rapidly declining

[4] See C. M. Chapman and others, *Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes* (Federation of Tax Administrators, Chicago, 1954), pp. 38-39.

Chart 1

VARIATION OF QUOTED STOCK AND DEBT ABOVE OR BELOW NORMAL DUE TO LESS OR MORE THAN AVERAGE USE OF STOCK IN THE CAPITALIZATION STRUCTURE OF CITY BUS CORPORATIONS, 1951



—involves using quotations for a 5-year period. These figures will be assembled by averaging for each security the monthly high and low quotations, then computing a weighted average of the annual figures. The suggested weights are *three* for the latest year, *two* for each of the next two years, and *one* for the fourth and fifth years preceding. If security transactions are infrequent, the figures used should approximate the average indicated as nearly as available data permit.[5]

As previously indicated, the value figures may in part be based on estimates but ordinarily only when reasonably satisfactory *stock* quotations are available. The usefulness of the stock and debt approach is reduced by lack of adequate quotations. The estimate of total value made by this method must be weighted less heavily if the quotations are unsatisfactory.

Rapidly Growing or Declining Business

IN those cases in which public utility businesses are currently growing or declining rapidly, special precautions are essential to assure that the plant valued is the plant actually in use on the date as of which the appraisal is made and not one in use two to five years ago. A simple device for dealing with the problem of the changing plant is to tabulate for the 5-year period only those issues of securities which have remained outstanding in the same book amount for the five years. Then the remaining stock and debt for tax date will be added on a spot market value basis.

[5] In the future, should some extraordinary security market situation arise, an adjustment in this entire procedure might be necessary to approximate the basic policy with which this statistical approach seeks to conform.

In practice the procedure suggested in the next section for rapidly declining or growing businesses can be employed for all.

Chart 2

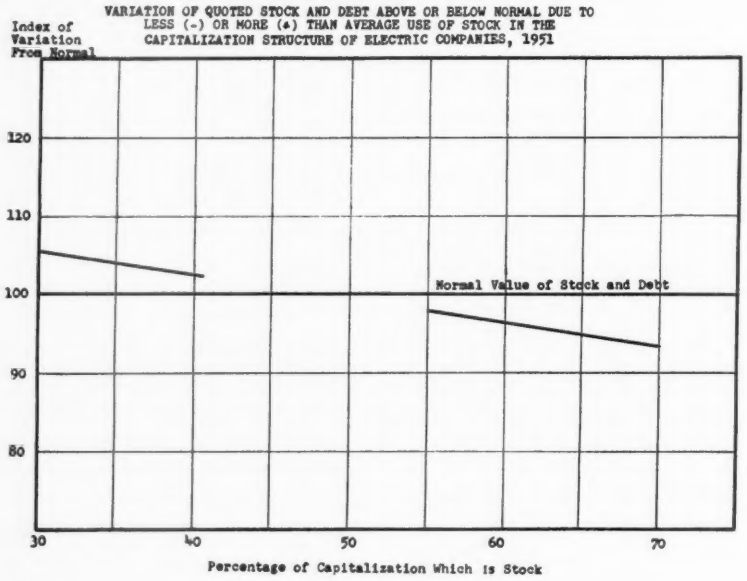
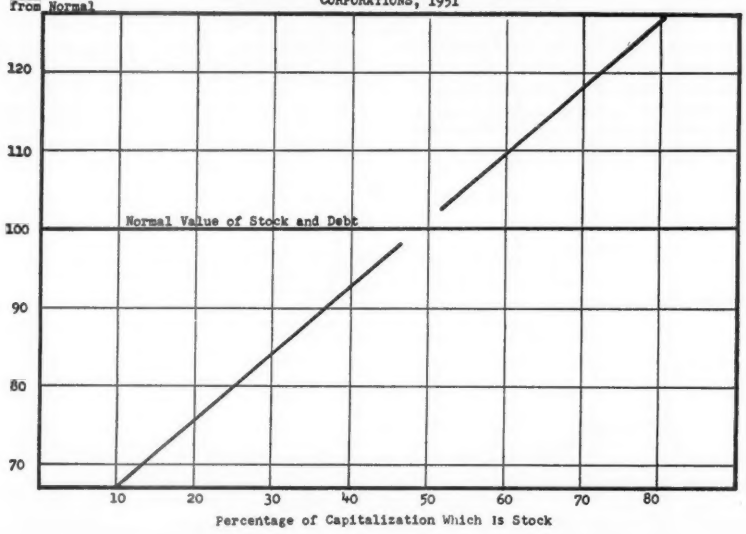


Chart 3

VARIATION OF QUOTED STOCK AND DEBT ABOVE OR BELOW NORMAL DUE TO LESS OR MORE THAN AVERAGE USE OF STOCK IN THE CAPITALIZATION STRUCTURE OF GAS AND ELECTRIC CORPORATIONS, 1951



That is, stock and bond quotations as of the year end will be the most recent quotations. The current items, as always, should be book figures as of valuation date.

This plan of handling security valuation makes possible the elimination of most "technical" distortions and the effects of other speculative flurries by considering basic securities for a long period; but it also reflects the market view as to the presumed plant on valuation date. This procedure is applicable to both rapidly growing and rapidly declining plants, and in either case makes automatic adjustment to reflect only the property as of valuation date—but without losing the "smoothing" effect of considering security quotations over a long period.

In a few cases certain adjustments may

be essential. For example, if changes in the amount of an important issue of debt were made in the fifth preceding year but not subsequently, the quotations on this bond issue might well be averaged for the 4-year period during which no change occurred.[6] Again, one would be inclined to investigate in special detail those corporations which in recent years have altered both common stock and certain issues of debt. Moreover, averaging is an aid—not an answer to the stock and debt valuation.

Adjustment for Nonoperating Property

BECAUSE public utility corporations frequently own property other than that employed in rendering electric, gas, or other public service, an adjustment must be made for nonoperating property. Such property must be deducted from the total corporate assets, estimated by the summation of stock and debt, to arrive at an estimate of the value of the public utility property, both tangible and intangible.

The distinction between operating and nonoperating tangible property is not usually difficult to draw, but the valuation of nonoperating physical assets is rarely easy. Generally, the uniform accounting systems require segregation; but occasionally the segregation is imperfectly made. In the first place, for certain classes of utilities, such as ferries and toll bridges, there are no standard accounting statements. In the case of certain other classes,

[6] Perhaps averages should be computed for securities on the open market the last three years or more, and spot quotations employed for those outstanding for a shorter period.

Chart 4

VARIATION OF QUOTED STOCK AND DEBT ABOVE OR BELOW NORMAL DUE TO LESS OR MORE THAN AVERAGE USE OF STOCK IN THE CAPITALIZATION STRUCTURE OF TELEPHONE COMPANIES, 1951

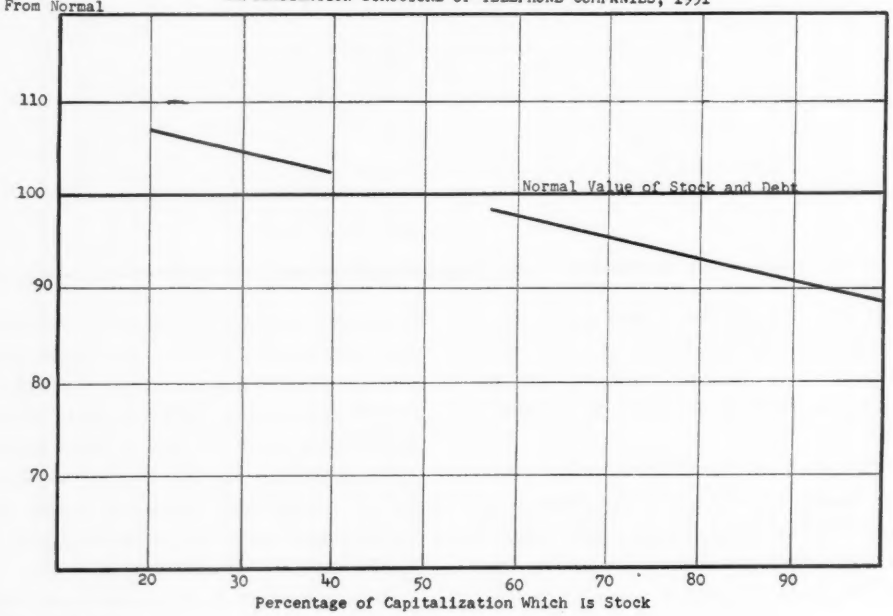


Chart 5

VARIATION OF QUOTED STOCK AND DEBT ABOVE OR BELOW NORMAL DUE TO LESS OR MORE THAN AVERAGE USE OF STOCK IN THE CAPITALIZATION STRUCTURE OF WATER COMPANIES, 1951

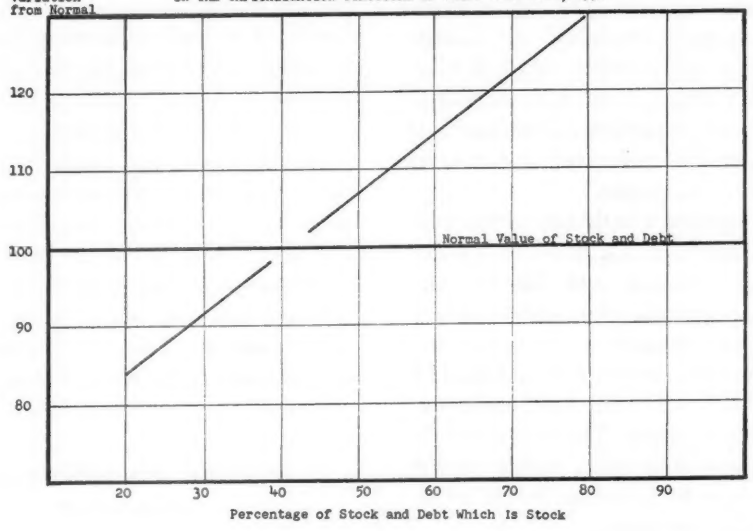
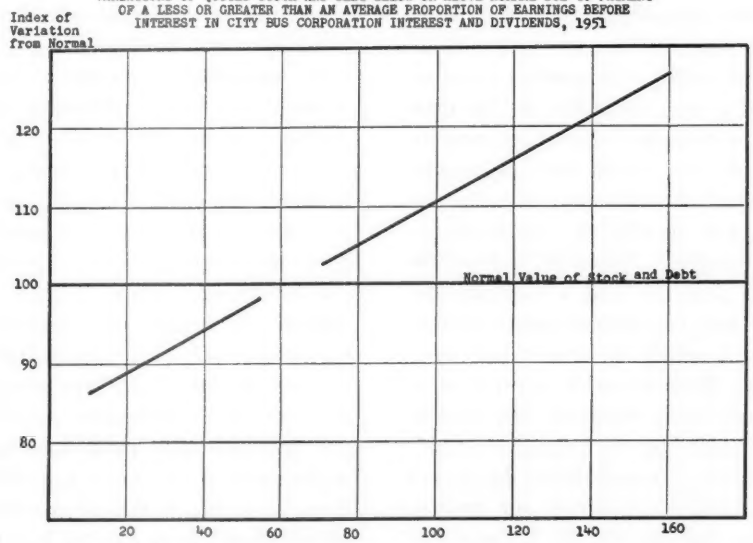


Chart 6

VARIATIONS OF QUOTED STOCK AND DEBT BELOW OR ABOVE NORMAL DUE TO PAYMENT OF A LESS OR GREATER THAN AN AVERAGE PROPORTION OF EARNINGS BEFORE INTEREST IN CITY BUS CORPORATION INTEREST AND DIVIDENDS, 1951



the established accounting systems or the practices in the industry bring about confusion. Bus and truck accounts provide illustrations. Even electric power companies and gas companies may include operating or nonoperating assets in "Depreciation Funds." With rare exceptions the corporate reporting distinctions, if bona fide, should be observed; in rare cases adjustments are proper.

In the cases of closely supervised public service corporations, however, the distinction is ordinarily not difficult. Gas company nonoperating intangibles, for example, usually include all or most items in balance sheet accounts 111, 112, 113, 114, 121, 123, 127, 128, 129, and sometimes other accounts. The records of the other closely supervised public service concerns have to a similar extent an accounting differentiation.

IN the valuation of nonoperating intangible property different alternative procedures are often followed — frequently in the instance of the same corporation. If the public utility corporation owns securities of a sort regularly on the open market, the published quotations may be accepted. To the extent that no transactions support the valuation of other intangibles, two possibilities are available. The first involves a detailed study of the particular property and a separate appraisal of each category of such holdings. The second, which is cruder but more practicable if considerable expense is to be avoided, is to capitalize the income from the miscellaneous intangibles which are not quoted. In capitalizing the income derived from such holdings, one must be careful to observe that he is concerned with *yield* as such. The rate of capitalization may well be quite different from the rate at which it is appropriate to capitalize operating income as an alternative or supplementary approach to appraisal. For example, if miscellaneous municipal bonds constitute a large part of the total of such holdings, a capitalization rate of 2.5 to 3.5 per cent may be appropriate.

Having ascertained the market value of total nonoperating physical and intangible property, the valuation technician deducts the figure from the ascertained value of aggregate stock and debt to arrive at the net stock and debt value; that is, the indicated value of all the public utility property actually operated by the corporation or corporate group constituting the unit.

Adjustment for Differences in Capitalization

IT is possible that the security market for a particular public service corporation's stocks and bonds may be influenced by the proportion of the total which represents proprietorship. If this is the case, then some quantitative measure of the significance of this factor will need to be found.

The issue may be stated a little differently. The average relationship of stock to stock and debt combined among corporations of any class represents on this score the *normally good corporate financial management* which the appraiser must assume. If a particular corporation depresses the value of its securities by employing an abnormally high proportion of stock in the capitalization structure, then the appraiser must make a compensating adjustment in the stock and debt quotations to arrive at the approximate value which would have existed had the management been *normal.* To arrive at the

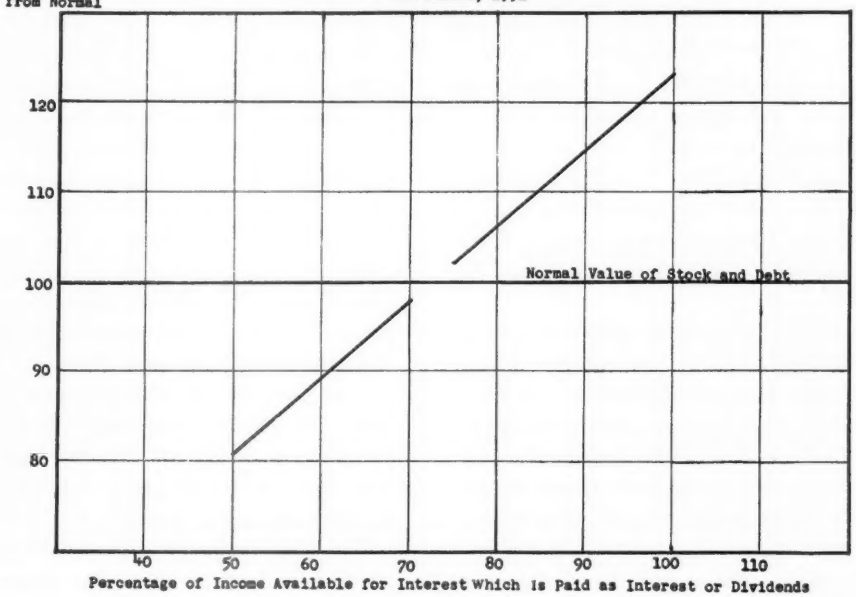
value of the property the corporation owns, the adjusted figure, or normal, is a more accurate estimate of value than the actual sale price of the stock and debt.

DATA for samples of several classes of public utilities were arrayed by the proportion of stock in the total of stock and debt. From the arrays the averages of capitalization rates for utility operating revenue, net utility operating income, and net utility operating income plus income taxes, respectively, were computed for enterprises having a lower than average percentage of stock and for those having a higher than average percentage of stock in their proprietorship and liabilities. The denominator used was net stock and debt estimated as above outlined. The differences between the two semiaverages were divided by two to find the approximate variation from the general average upward or downward, as the case might be. (The total differences, showing the relationship between the average of the upper and of the lower halves, reflect variations *both* upward and downward from the general average of all the rates.) The three figures (those derived by use of the different measures of earnings) were reduced to percentages of the general average and then algebraically averaged according to the weighting developed previously[7] to show the relative reliability of the capitalization rates for utility operat-

[7] "New Evidence on Tax Valuation of Public Service Property—Capitalization of Earnings," by James W. Martin, *National Tax Journal*, VII, No. 4 (December, 1954), 309-318.

Chart 7

VARIATIONS OF QUOTED STOCK AND DEBT BELOW OR ABOVE NORMAL DUE TO PAYMENT OF A LESS OR GREATER THAN AN AVERAGE PROPORTION OF EARNINGS BEFORE INTEREST IN ELECTRIC COMPANY INTEREST AND DIVIDENDS, 1951



ing revenue, net utility operating income, and net utility operating income plus income taxes, respectively. The result was plotted as the diagonal lines shown in Charts 1 to 5.

To use any of the charts one merely computes for a particular utility company the ratio of stock to total net stock and debt (plotted on the chart from left to right), finds that percentage on the diagonal line, and divides the net stock and debt figure by the corresponding index shown as a percentage at the left. This operation means dividing by less than one if the percentage is below the normal and thereby raising the quotations to normal. It means dividing by more than one to reduce them to normal if the percentage is above normal. Following this procedure gives the net stock and debt adjusted to normal to correct for the booming or depressing of total security values by relative over- or underuse of stock as compared with average practice in financing the particular class of utility.

The chart provides for no adjustment for stock and debt of a taxpayer with approximately an average ratio of stock to total stock and debt. The skip in the line is based on the assumption that the accuracy of the data does not justify a correction unless the variation exceeds 2 per cent.

It should be emphasized that the policies which produced the abnormally high or low quotations are dependent, not alone on what corporate management has done, but also on what forces outside the corporation, such as income taxes, regulatory policies, and changes in security buyer's preferences, have done. When it is said, then, that corporate management booms or depresses the market for securities, it must be understood that this refers to corporate action over a long period in the light of circumstances, some of which the corporation officials cannot control. It must also be emphasized that the adjustments, which are based on average experience for each class of public service corporation, secure only approximate results.

Adjustment for Dividend Policy

If a corporation pays out about the usual proportion of its total income available as interest and dividends, then the average stock and debt quotations may in this respect be regarded as normal. If, on the other hand, another corporation pays out distinctly more or less than the average proportion, its practice may be regarded to that extent as abnormal. Certainly, investment practice would not lead one to expect the same earnings-security price ratio in the one case as in the other.

The earnings and stock and debt data for a sample of each class of corporations studied were arrayed in terms of the ratio of combined interest and dividend payments to the income available for such payments. In order to test the booming or depressing effects of high or low relative dividend distributions on security quotations, semiaverages of the ratios were again computed and again averaged according to the same procedure employed to test the effect on quotations of under- or overuse of stock in the financing pattern. The results of the statistical analysis are pictured in Charts 6 to 9. Data for this adjustment in the case of water companies were not at hand.

The chart for each class of utility corporation is used in making the adjustment

Chart 8

VARIATIONS OF QUOTED STOCK AND DEBT BELOW OR ABOVE NORMAL DUE TO PAYMENT OF A LESS OR GREATER THAN AN AVERAGE PROPORTION OF EARNINGS BEFORE INTEREST IN GAS AND ELECTRIC COMPANY INTEREST AND DIVIDENDS, 1951

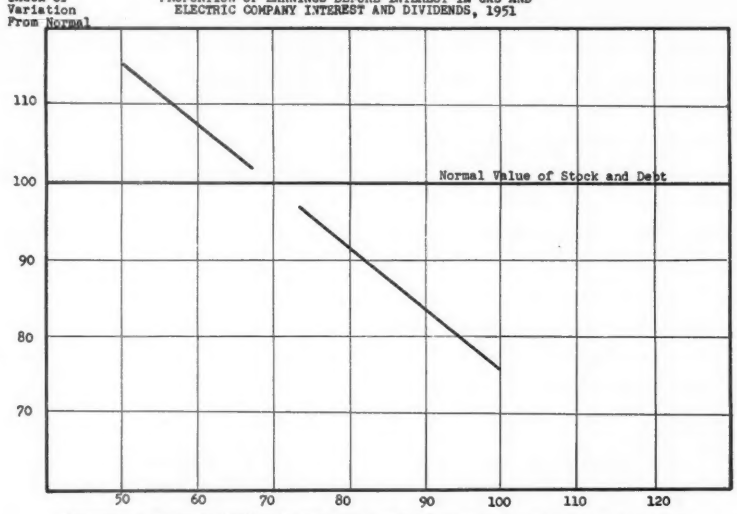
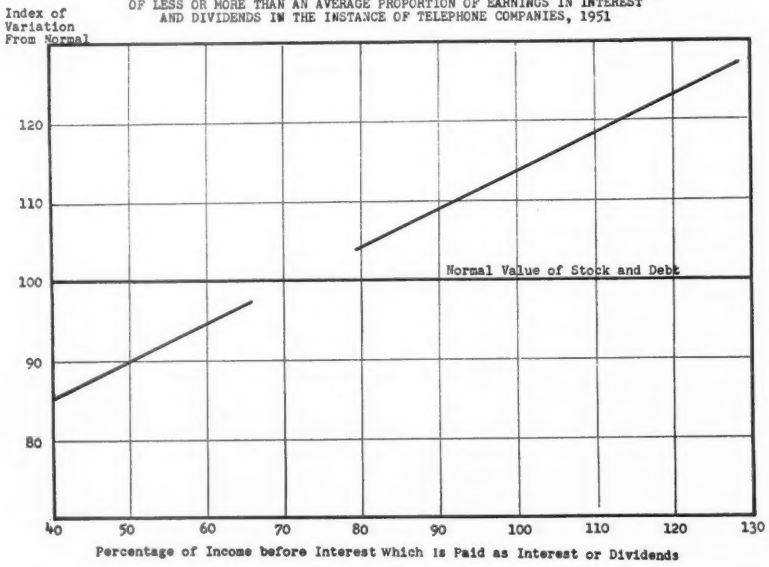


Chart 9

VARIATION OF QUOTED STOCK AND DEBT BELOW OR ABOVE NORMAL DUE TO PAYMENT OF LESS OR MORE THAN AN AVERAGE PROPORTION OF EARNINGS IN INTEREST AND DIVIDENDS IN THE INSTANCE OF TELEPHONE COMPANIES, 1951



to correct net stock and debt quotations for unusual dividend policy. The ratio of dividends and interest to income before payment of interest for a particular corporation is computed, located on the diagonal line on the chart by means of the left-to-right scale, and the stock and debt data as previously adjusted[8] divided by the corresponding percentage shown in the left-hand margin. The newly adjusted figure gives the net value of the total assets used in the public service as estimated by means of the stock and debt approach. Again, the adjustment is not made unless the variation due to dividend policy is at least 2 per cent upward or downward from the normal or average for all companies of the class.

IN appraising the estimation of net stock and debt including this and the other adjustment just outlined, the critical valuation man should keep in mind that what is wanted is a valuation of the *assets* operated by the utility as they would be most likely to be priced in an open market transaction.

That is, in making an appraisal, the valuation of the stock and debt is not an end but merely a means of getting at a reasonable estimate of the value of the properties owned by the public service corporation. Thus, according to the assumption underlying the corrections, if a corporate management has taken steps to depress quotations well below or to increase them to a level definitely above normal, there can be little doubt that the quoted figures fairly represent the value of the equities of stockholders and creditors in the corporation; there can be even less doubt that the gross quotations *fail* directly to represent the free-market value of the assets *owned* by the same corporation.

[8] Logically, each of these two adjustments should be made after the other is accomplished. The character of the data does not appear to the writer to justify the alleged refinement.

Socialized Power Comes First

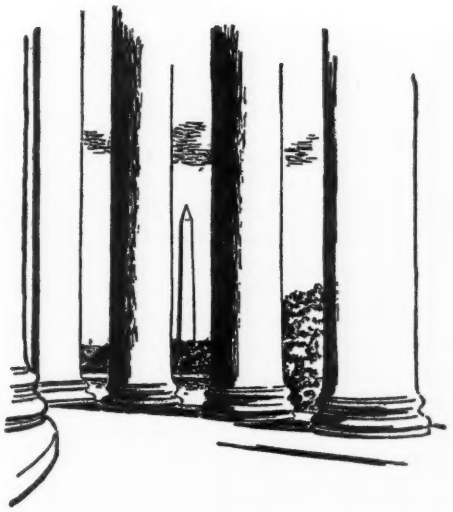
"FOR *years the efforts of American Socialists, and others who follow the socialist line, have been largely devoted to encouraging government electric power development.*

"There should be no mystery as to the reason for this concentration of effort. It was clearly explained in 1925 by the late Carl D. Thompson, a leading Socialist and public power advocate. He said: 'The movement for public super power becomes the most vital phase of the public ownership movement. The control of electric power will obviously carry with it the control of the industries of the nation, the control of transportation, of mining, of agriculture. . . . It will also dominate and determine very largely the domestic life of the people.'

"In short, the surest way to make government boss of everything and everyone is to create a government electric power monopoly. Then the road to dictatorship will be wide open."

—EXCERPT *from Industrial News Review, published by E. Hofer & Sons.*

Washington and the Utilities



Victory for Whom?

EVERYBODY who has played a part in the Dixon-Yates controversy seems to be professing "delight" at the outcome—with the exception of the Dixon-Yates people and the people in and around West Memphis, Arkansas. President Eisenhower said he was delighted that Memphis was going to build its own plant, thereby making the Dixon-Yates plant unnecessary for supplying power in that area. Mayor Tobey of Memphis said he was delighted that the AEC contract for the West Memphis project had been canceled, allowing the city to go ahead with its own plant.

Democratic critics of the Dixon-Yates contract were presumably delighted since they talked about a great "victory," even while they continued to hunt down further details in hope of uncovering political ammunition for the forthcoming election campaign of 1956.

But a sober reappraisal of the situation hardly gives any support to the claims from any quarter that a "victory" has been won. The public power bloc Democrats, for all their sniping in Congress, were unable to beat the Dixon-Yates contract on a single legislative test. Three times Congress refused to vote funds for the rival TVA steam plant. They lost on votes either in committee or on the floor. Indeed, the contract itself was in effect and had cleared virtually every barrier except the formal approval of financing by the SEC when the administration voluntarily pulled the plug and the whole deal went down the drain.

About the only way the Democrats can yet make political capital out of such a situation might be to uncover evidence of actual wrongdoing or "scandal"—something that they have been unable to do despite some wild charges in the Senate comparing the contract to "Teapot Dome." All the mountainous labors of both the congressional Joint Atomic Energy Committee and the Senate Judiciary Subcommittee on Monopoly have been able to bring forth are several small mice in the form of bureaucratic bungling and lack of tactful handling. And even these slips must be viewed in the light of hindsight, with respect to a difficult and complex negotiation which has now become a moot question for practical purposes.

In fact, the very persistence of some of

the partisan critics in riding this dead horse suggests a desperate lack of real issues on more lively matters.

The Future of TVA

BUT the real problem involved still remains unsolved by either the administration or Congress. It is the over-all question of deciding what the limit should be, if any, on the responsibility of the federal government to provide partially subsidized and largely tax-exempt services benefiting purely local areas at the general expense of the taxpayer. The decision of the city of Memphis to build its own plant was only a partial answer affecting only one community. The Dixon-Yates contract was another partial answer attempted by the administration and now dropped. But neither could add up to a complete answer to the fundamental question of what to do about TVA, and the cities of the area now depending upon it for service.

There will be other Tennessee cities, sooner or later, which will have the same problem—as the power demands of their growing population expand and multiply. Will TVA go on building more and more plants to provide a utility service to local communities at the expense of the federal taxpayer? Or will the federal government draw a line and tell the local communities to take it from there? Or will TVA itself be put on a full tax-paying, self-supporting basis, beyond the reproach of subsidy or discrimination against the taxpayers of other areas?

It is not an easy question to answer politically, economically, or financially. But sooner or later both the White House and Congress are going to have to face up to the answer. TVA has come of age. And just like anybody else over twenty-one years of age, there is some growing sentiment to the effect that it should stand on its two feet and support itself without further demands on the federal Treasury.

AND what is done about TVA may well set the pattern for an even broader over-all federal policy of limiting the federal government's responsibility for providing local benefits in the form of electric service in other areas. It may be that the political combination of special local interests will be strong enough to write their own policy answer against any such limitation. Such would be the disposition of the public power bloc, including such exponents as the Tennessee Senators Kefauver and Gore, the Oregon Senators Morse and Neuberger, and others of like mind. Or it may be that the administration will come to grips with the problem in the form of a long-range program to be submitted to the next session of Congress. Whatever the answer will be, the fast pace of growth and power needs in the TVA area and elsewhere make it impossible to defer a showdown much longer.

The Gas Bill

JUST as there seems to be enough claims for "victory" to go around to nearly everybody in the wake of the Dixon-Yates matter, so there seems enough argument to go around to virtually all parties interested in getting gas producer legislation at this session of Congress. At this writing the first session of the 84th Congress was thundering down the homestretch towards the target date for adjournment on or around August 1st, and there seemed considerable uncertainty about the efforts of interested Congressmen to take up the respective bills voted out of the Senate and House Interstate Commerce committees for partially exempting the independent producers from Federal Power Commission regulation.

The House Rules Committee was slated to consider moving the House bill to the floor on July 26th. But the usual pre-adjournment log jam made it doubtful that the Senate could get around to the legislation without inviting a filibuster.

As a matter of fact, the prevailing atmosphere on Capitol Hill was such as to suggest that the best thing which could happen to the bills in their own interest would be to let them rest in status quo until the next session. They would at least remain in a position for prompt action if intervening developments should change the congressional tide in their favor.

Shortly before the adjournment date, a private canvass indicated that if the bill were brought to a floor vote, the outlook was far from decisive. Needless to say, an actual defeat for the legislation in either chamber would doom hope for any action even in the next session.

And so supporters of the measure had to look forward to a recess of grumbling about who dropped the ball. Southwestern Congressmen, who earlier had been optimistic about their chances of getting the bill passed, blamed disunity and lack of cohesive support from different branches of the industry for the impasse.

THE two pending House resolutions to investigate the gas industry indicate mutual lack of enthusiasm between the "producer Congressmen" and Congressmen from the pipeline and distributing areas. If, in a spirit of frustration, these resolutions are actually adopted, the rift could grow even wider and the chance of eventual legislation smaller. The best prospect for the exemption bills would seem to lie in patching up these differences before the session next January and developing good sound and persuasive arguments with plenty of circulation as to why such legislation is necessary.

If this can be done, enough Republicans might still be persuaded to vote for the bills to pass them next year. It was House Speaker Rayburn who tipped the fact that Republican votes were needed. He did this when he suggested that the administration would have to come forward with more support, implying that the House leadership had corraled about all the Democrats to support it who could be influenced. But the Eisenhower administration, officially enigmatic about its own plans for the 1956 campaign, hesitated. The outlook is that a producer exemption bill will still get Eisenhower's signature only if, as, and when it can reach the White House desk under its own steam.

Meanwhile, the FPC, after delaying action a full year, is getting ready to impose some preliminary regulations along the lines required by the U. S. Supreme Court decision in the Phillips Petroleum Company Case. Counsel for the FPC, in the light of the present stalemate in Congress, has been quietly meeting with various producer and pipeline groups, informally discussing ways and means for establishing workable controls and standards for measuring the value of production services.

So far the FPC's staff has shown a tendency to be realistic as well as elastic in the face of the enormous regulatory and administrative difficulties involved in setting up the new machinery for expanding FPC's jurisdiction over the producers.

Public Works Funds

PASSAGE of a compromise (but still controversial) $1,365,613,500 public works appropriation bill, including funds for AEC, TVA, USBR, Army civil functions, and all federal power construction and marketing agencies, finally came during the closing days of the session. The bill, which was substantially that passed

by the Senate, met with serious but futile opposition from economy-minded members of the House. They objected to inclusion of 50 or 60 projects, at an estimated eventual cost of more than $2 billion.

Singled out as extravagant was the $1,000,000 appropriated for a new start on the Ice Harbor project in Washington. The 270,000-kilowatt multipurpose enterprise will be the first begun in the Pacific Northwest since The Dalles dam was begun in 1951. It will eventually cost close to $400,000,000, according to some estimates. Funds were also appropriated for starts on Cougar dam partnership construction ($500,000,000) and Hills Creek in Oregon ($310,000,000). The Southwestern Power Administration continuing fund for the purchase of energy and for transmission charges remained unchanged at $6,000,000.

Over-all figures were $575,000,000 for AEC operating expenses; $27,530,000 for TVA; $554,000,000 for Army civil functions; and for reclamation construction, $146,041,000.

Kestnbaum Report

ANOTHER independent commission (in addition to the Hoover Commission) recently submitted its report to Congress. The 25-member Commission on Intergovernmental Relations, headed by Meyer Kestnbaum (previously headed by former Dean Clarence E. Manion of the Notre Dame Law School), rendered its 300-page report on federal-state relations and finance. The commission held firmly to the view that our society is enriched and our political system strengthened where the states and localities have a vital rôle. In dissent on this broad philosophical point was Senator Morse (Democrat, Oregon). The main conclusions of the Hoover Commission Report on Water Resources and Power are given added support by the recommendations of the Kestnbaum Commission.

THE Commission on Intergovernmental Relations recommends (among other things) the following: (1) establishment by Congress of a permanent board of co-ordination and review to advise the President and Congress on a natural resources policy within the national government and between it and the states; (2) state designation of an agency to co-ordinate federal and state resources planning, policies, and administration; (3) action to require that state and local views be taken fully into account prior to authorization of new federal projects; (4) federal surrender to states of a greater measure of initiative and responsibility over multipurpose and basin-wide development of water resources; (5) observation of local laws governing inland waters on the part of federal agencies; and (6) equitable and weighted division of capital costs of multipurpose projects between the national government and the states.

Recommendations of the Kestnbaum Commission may appear in legislative form in the next session. The President has taken the report under advisement. Some of the suggestions may have a favorable reception in the several states where guidance along such lines is anxiously sought. State and local leaders who look to the report to guide them out of their administrative or fiscal difficulties will be disappointed. For, despite the claims of previewers and the expectations which were built up over the life of this investigatory commission, it offers no panacea other than faith in the federal system as established under our Constitution.

Wire and Wireless Communication

Appeal Allowed in New York Phone Case

A FINAL disposition on the New York Telephone Company's request for a $68,500,000 rate increase may come sooner than anticipated as a result of a recent decision of the New York court of appeals.

A lower court had ruled previously that the state public service commission must reconsider its denial of the entire rate request. Hearings on the case before the commission took six months and there was reason to believe that a new hearing would last as long. The court of appeals, in its decision, granted the commission the right to appeal the lower court's ruling, and arguments before the high court will be heard when the court reconvenes in October.

The court of appeals also granted Attorney General Jacob K. Javits the right to file a brief as "friend of the court" in next fall's appeal by the commission and to take part in the oral arguments. Javits will support the commission in its opposition to a rate increase.

The final ruling, in this case, is expected to turn on the question of whether the New York commission could refuse to accept or consider evidence of current value in determining a rate base for fixing telephone rates under state law. Furthermore, it was generally expected that the highest state court would want to consider arguments in such an important case, rather than merely send the case back to the commission for further proceedings at this point.

In another procedural decision affecting the New York Telephone Company, the court of appeals voted 4 to 2 to sustain a lower court ruling sending back to the commission a complaint of a real estate firm that the telephone company should stop collecting a 3 per cent New York city sales tax on calls to Westchester and Nassau counties. The utility explains that its toll equipment cannot differentiate between local and suburban calls on the basis of city-county limits. The company has, therefore, been setting aside a part of the total tax collections for disposition yet to be determined.

Western Union Sells Foreign Cable Service

THE Federal Communications Commission is expected to give its approval to Western Union's sale of its international cable business to Textron American, Inc. General agreement was reached on terms of the sale early last

month, with the price reported to be about $18,000,000. Western Union was ordered to dispose of its foreign cable operations by a 1943 act of Congress, which at the same time permitted Western Union to absorb the former Postal Telegraph Company.

PROSPECTIVE purchasers have been difficult to find, according to Western Union President Walter P. Marshall, particularly in view of the prospect that sale to a competing communications company might run afoul of the antitrust laws. Negotiations with Textron were opened by Marshall who had noticed Textron's recent moves to diversify its holdings. Textron American was formed early this year to effect a merger of three textile companies: Textron, Inc., American Woolen Co., Inc., and Robbins Mills, Inc. Since then it has bought several companies in varied manufacturing lines, in keeping with an announced plan to put about half of its capital into diversified nontextile investments.

Under the pending sale and reorganization plan, Textron would form a wholly owned subsidiary, Western Union Cables, Inc., in which Western Union Telegraph Company would hold no stock and have no representation in management. The new company would take over the entire cable-operating organization of Western Union, with about 1,500 employees in this country and abroad. Western Union operates about 30,000 miles of ocean cable, including ten of the 20 existing lines between Europe and North America, together with lines to Cuba and other points in the West Indies. Its land lines handle transmission of cablegrams within the United States to and from cable heads, and that plan would continue under the proposed reorganization.

While merger of all international telegraph companies has been suggested as desirable, provided Congress were to permit it by special legislation, Textron says it has no plans for other acquisitions in this field.

Western Union's principal competitors for foreign telegraph business are International Telephone & Telegraph Corporation's three cable and radio subsidiaries and RCA Communications, Inc.

AT&T Reports Gains for Second Quarter

AMERICAN TELEPHONE AND TELEGRAPH COMPANY business continued to grow at a fast pace during the second quarter. Cleo F. Craig, AT&T president, told stockholders that Bell system companies gained about 575,000 telephones during the period and the increase since the beginning of the year is more than 1,200,000. This compares with about 800,000 in the first half of 1954. The volume of long-distance messages also continues to run substantially ahead of a year ago, Craig said.

AT&T's directors have not yet decided on the exact time for the company's coming issue of convertible debentures, in an amount up to $650,000,000, which the stockholders authorized at the annual meeting in April. Craig said the offer will probably be made in the next few months. The offer is to be made to stockholders under pre-emptive subscription rights. If substantially the full $650,000,000 authorization is issued, the offering would be on the basis of one $100 debenture for each eight shares of stock held, at a price to be announced later.

For the quarter ended June 30, 1955, AT&T reports a net income of $134,380,000 after charges and federal taxes, equal to $2.66 a share on 50,537,000 average number of shares of capital stock out-

standing during the period. This was in contrast with the first-quarter results, when earnings slipped to $2.57 a share from the 1954 period's $2.62. System-wide operating revenues for the March-May period rose past $1.3 billion this year from less than $1.2 billion in 1954.

FCC Rules on Use of Radio Frequencies

THE FCC approves changing its rules to allow communications common carriers to use radio frequencies allocated to gas, electric, steam, and water utilities. The commission has had under consideration for some time requests from the American Telephone and Telegraph Company, United States Independent Telephone Association, Rural Electrification Administration, and others that the commission approve allocation of radio frequencies now assigned to other utilities. The communications common carriers claim that the frequencies are needed for telephone and telegraph construction and maintenance vehicles.

In a proposed report on the problem issued by the FCC last October, the commission indicated that the use of radio by telephone companies would be provided for in part by the special industrial service, in so far as right-of-way construction was concerned, and promised to consider other maintenance and repair requirements in connection with possible amendments to Part 6 of the commission's rules. After further study of these problems, the commission, in an announcement issued June 30th, said that "it would not be in the public interest to provide for the use of radio for such purposes through sharing of frequencies allocated to the domestic public radio service." Instead, the commission proposes to amend § 11.251 of Part 11 of the rules so as to provide that communications common carriers having maintenance and construction requirements will be eligible in the power radio service.

Comments on the proposed rule changes are due by September 16th, the FCC announced.

Commissioner Robert E. Lee dissented to the plan.

REA Loan Policies Push Phone Mergers

THERE are signs that REA's insistence on a sound operating company as a prerequisite to an REA loan is forcing consolidations of small telephone companies in some areas. This appears to be the case in Nebraska, at least, where a number of mergers are in the discussion stage. Of the 135 telephone companies in Nebraska, 131 are of the small community type. A number of these communities are having to face the problem of replacing and improving equipment, according to Leroy Sieckmeyer, accountant for the state railway commission.

"The plant and equipment of some of these companies are deteriorated and not capable of giving proper service. Then, too, there are some sparsely populated areas where farmers still don't have telephone service," Sieckmeyer said.

Noting that the cheapest way to improve is to get an REA loan at 2 per cent, Sieckmeyer pointed to Burwell, Nebraska, as an example. Last year, two competing companies in Burwell were combined into the Burwell Rodeo Telephone Membership Corporation and with the aid of an REA loan the new company has put in dial service.

Four other possibilities for mergers are now being studied.

Financial News and Comment

By OWEN ELY

Long-term Outlook for Natural Gas

MARVIN CHANDLER, president of Northern Illinois Gas Company, recently delivered an interesting address before the Life Officers Investment Seminar on the future of the natural gas industry. He sought to allay any fears that the supply of natural gas might prove insufficient in future to furnish distributing companies with the amounts required for an expanding business. The country's proven reserves of 211 trillion cubic feet are sufficient for twenty-three years' supply, based on present levels of production. But the important fact is that more gas is being discovered than is being used. While this margin was reduced in 1954, the general average in recent years has been about 1.7 cubic feet added to reserves for each cubic foot withdrawn for sale. Even if in future new discoveries only equal loads in excess of the 1954 level, plus one-half of 1954 production, reserves should last about forty-six years.

Moreover, underground storage capacity has been rapidly increasing and now approximates 1.9 trillion cubic feet in 172 fields. This storage serves two purposes—to meet winter peak demand, and to conserve for heating use gas which might otherwise be used for marginal purposes in summer. Thus, the number of customers that can be supplied with *firm* gas requirements, without increasing actual production, is being materially increased.

CERTAIN oil and gas experts are optimistic that future reserves will be considerably larger than the present estimated amount. It is considered likely that offshore exploration will develop large gas fields in the Gulf of Mexico. Vice President Terry of the Chase Bank has estimated that future supply will considerably exceed 500 trillion cubic feet. This view is shared by R. C. Alden, chairman of the research planning board of Phillips Petroleum Company, which has very large holdings of gas. Another authority, Vice President Hinson of Continental Oil Company, has estimated future supply at 600 trillion cubic feet.

Future Canadian reserves have been estimated as high as 200 trillion cubic feet, or almost as much as present U. S. reserves. The Province of Alberta alone is expected to bring in 150 trillion cubic feet,

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while it will probably use less than 5 trillion cubic feet in the aggregate. Various plans are under way to bring this Canadian gas to the U. S. to serve areas on the Pacific coast, the St. Paul-Minneapolis area, and perhaps northeastern sections of the U. S. Currently, some gas is being moved from Canada into Montana.

There are other large sources abroad, from which gas in liquid form might be imported on barges. North and South American proven oil reserves (excluding the U. S. and Canada) indicate that 70 trillion cubic feet of gas should be available—9 trillion in Mexico and 54 trillion in Venezuela. Ultimate reserves may prove much larger. *Gas Age* recently commented on the possibility of obtaining low-cost gas from the Middle East by transporting it in liquid form. Tentative estimates indicated that it could be delivered in London at a cost of about half that of manufactured gas.

THERE is also the possibility of producing gas from coal, which may eventually prove cheaper than natural gas. Mr. Chandler stated:

> The possibilities in this direction are surprisingly promising and are the result of the large sums of money spent on research in the last few years. The expenditures for research in the United States in recent years have been at a level of over $3 billion annually, and while only a portion of this is directed specifically to problems of gasification, yet there are many related items that become useful in the over-all gasification development.

Hall M. Henry, vice president of NEGEA Service Corporation in Cambridge, Massachusetts, reports (*Gas Age*, March 10th) that gas may be produced by several gasification methods in a cost range of 45-65 cents per Mcf—less than half the estimated cost in 1948. Future technological advances should further decrease this cost. A large plant is being constructed in South Africa at an overall cost of $92,000,000, designed to convert coal into an intermediate gas, which could be upgraded into pipeline quality gas. This may afford valuable operating experience for experiments in this country.

Underground gasification of coal has been studied for years in this country. The Bureau of Mines and Alabama Power (together with Stanolind Corporation more recently) have been doing experimental work for several years. While this gas would be of very low quality (about 100 Btu per cubic foot) it could be produced for less than 10 cents per Mcf, excluding coal acquisition costs, and could probably be upgraded at relatively low cost.

There is also the carbonization method of obtaining gas from coal, but this involves the sale of substantial by-products. It is said that the principal by-products, char or coke, would be readily salable to the steel companies at a relatively high price, displacing high-grade coals.

DEVELOPMENTS in atomic energy may materially benefit the gas industry, Mr. Chandler thinks. Thus if nuclear energy is used largely to generate electricity, it will cheapen the price of coal for gasification; and atomic energy itself may be used in the gasification process either to break down the coal, or to supply the heat needed in the process.

Standard Oil Development Company plans to spend about $1,000,000 over the next five years in studying atomic radiation, in the hopes of developing a new cracking process that is easier to control and less expensive. The AGA Information Service of May 20th stated that the

PUBLIC UTILITIES SECURITIES OFFERED FOR SUBSCRIPTION AND/OR SALE

(000 omitted)

	January 1 to June 30, 1955					January 1 to June 30, 1954				
	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies
Long-Term Debt										
Offered Publicly	$ 671,507	$554,500	$ 50,507	$ 58,500	$ 8,000	$1,179,500	$ 810,000	$344,500	$ 25,000	-
Offered through Subscription	39,237	37,737	1,500	-	-	95,350	45,350	50,000	-	-
Offered Privately	262,700	39,650	183,450	32,300	7,300	171,950	77,300	55,900	27,450	$11,300
Total	$ 973,444	$631,887	$235,457	$ 90,800	$15,300	$1,446,800	$ 932,650	$450,400	$ 52,450	$11,300
Preferred Stock										
Offered Publicly	$ 123,850	$ 56,825	$ 35,000	$ 26,400	$ 5,625	$ 254,033	$ 229,823	$ 11,010	$ 12,300	$ 900
Offered through Subscription	23,243	23,243	-	-	-	5,042	5,042	-	-	-
Offered Privately	29,200	13,750	10,000	1,250	4,200	42,950	35,450	-	3,500	4,000
Total	$ 176,293	$ 93,818	$ 45,000	$ 27,650	$ 9,825	$ 302,025	$ 270,315	$ 11,010	$ 15,800	$ 4,900
Common Stock										
Offered Publicly	$ 146,582*	$ 78,599	$ 61,803*	-	$ 6,180	$ 144,328	$ 78,003	$ 46,663	$ 19,662	
Offered through Subscription	219,426	105,198	83,417	$ 25,180	5,631	227,718	191,202	15,842	20,674	
Total	$ 366,008	$183,797	$145,220	$ 25,180	$11,811	$ 372,046	$ 269,205	$ 62,505	$ 40,336	-
Total Financing	$1,515,745	$909,502	$425,677	$143,630	$36,936	$2,120,871	$1,472,170	$523,915	$108,586	$16,200
SEGREGATION OF FINANCING - BY PURPOSE										
Total Refundings	$ 167,287	$124,348	$ 17,307	$ 25,632	-	$ 356,438	$ 301,638	$ 54,000	$ 800	-
Total Divestments	$ 66,919	$ 3,150	$ 60,589	-	$ 3,180	$ 49,509	$ 1,926	$ 39,638	$ 7,945	-
Nev Money										
Long-Term Debt	$ 836,887	$521,887	$228,150	$ 71,550	$15,300	$1,167,159	$ 711,804	$396,400	$ 47,655	$11,300
Preferred Stock	137,811	81,718	25,000	21,268	9,825	220,433	189,523	11,010	15,000	4,900
Common Stock	306,841	178,399	94,631	25,180	8,631	327,332	267,279	22,867	37,186	-
Total Nev Money	$1,281,539	$782,004	$347,781	$117,998	$33,756	$1,714,924	$1,168,606	$430,277	$ 99,841	$16,200
Total Financing	$1,515,745	$909,502	$425,677	$143,630	$36,936	$2,120,871	$1,472,170	$523,915	$108,586	$16,200
SEGREGATION OF FINANCING - BY TYPE										
Competitive Bidding	$ 708,606	$629,812	$ 13,794	$ 57,000	$ 8,000	$1,158,271	$ 917,334	$215,937	$ 25,000	-
Negotiated Sales	$ 232,855	$ 60,113	$133,037	$ 27,900	$11,805	$ 419,590†	$ 200,492	$186,236	$ 31,962†	$ 900
Subscription										
Competitive Bidding	-	-	-	-	-	$ 110,917	$ 60,917	$ 50,000	-	
Negotiated Sales	$ 120,531	$ 94,513	$ 14,446	$ 7,981	$ 3,591	80,349	64,486	1,957	$ 13,906	
No Underwriting	161,375	71,664	70,472	17,199	2,040	136,844	116,191	13,885	6,768	
Total Subscription	$ 281,906	$166,177	$ 84,918	$ 25,180	$ 5,631	$ 328,110	$ 241,594	$ 65,842	$ 20,674	-
Private Sales	$ 292,378	$ 53,400	$193,928	$ 33,550	$ 11,500	$ 214,900	$ 112,750	$ 55,900	$ 30,950	$15,300
Total Financing	$1,515,745	$909,502	$425,677	$143,630	$ 36,936	$2,120,871	$1,472,170	$523,915	$108,586	$16,200

* Includes 478,000 common stock sold privately.

† Includes $1,500,000 preferred stock not underwritten.

Ebasco Services Incorporated, Corporate Finance Department, July 5, 1955 - CHVD

Atomic Energy Commission is keenly interested in developing this potential economic use of the atom, and that the Bureau of Mines and the AEC might jointly conduct a research program.

It has been estimated that a synthetic gas of 250-300 Btu's might be produced for about 10 cents per Mcf, and converted over a catalyst to 1,000 Btu pipeline gas at a cost of about 55-75 cents. There would be no radioactive contamination of the gas, and while the slag might be slightly radioactive, its disposal would not be a serious problem.

GASIFICATION research will not merely serve to guarantee more ample long-term reserves but also to provide a competitive cost factor for natural gas, tending to establish a price "ceiling" for the pipeline companies to meet. Gas produced from coal would also be available for peaking purposes, thus avoiding the cost of building additional pipelines in order to supply growing peak demands. Mr. Chandler concluded:

> There are many people in the gas industry that feel we must proceed promptly to develop pilot gasification plants that will accomplish the above objectives. Under such a plan, when natural gas can no longer supply our demands, we will have efficient methods for producing gas from coal at prices that will allow us to maintain our competitive position. . . . Serious thought is now being given by the Institute of Gas Technology to the building of a pilot plant designed for processing approximately 1,000 tons of coal per day. As a matter of general interest, we have accumulated 113 patents assigned to companies with large resources which have studied the gasification of coal. From the research work so far done and that which we can anticipate in the future, we feel assured that the proper technology for an efficient plant will be developed rapidly.

He next discussed the future markets for gas. With respect to potential competition from electricity, he made the following approximate comparisons as to costs:

	Gas	*Electricity*
Cooking—Cost of Popular Range	$232	$301
Do.—Operation, Maintenance*	$58	$107
Water Heating—Cost of Heater*	$138	$185
Clothes Drying—Operating Cost	20%	100%
Summer Air Conditioning—		
Cost of Units	125%	100%
Do.—Cost of Operation	50%	100%
Winter Heating		
Resistance Type—Cost Per Therm	9¢	30¢
Heat Pump (in South)	9¢**	14¢

* Operating cost of water heater included with that of range. ** Maintenance costs would probably also be considerably lower for gas.

THE above comparisons are intended to summarize briefly Mr. Chandler's discussion, and the figures should be studied in connection with the context by those interested in the technical aspects. A gas-designed heat pump, he points out, could overcome many of the electric heat pump's disadvantages by using the waste heat of the unit instead of depending entirely on the outdoor air for a source of heat. Such a heat pump would naturally be more efficient in northern areas, where outside air is colder. Theoretically, a gas heat pump should be nearly three times as efficient as an electric heat pump, since the latter obtains only about one-third of the heating value of the fuel—the remainder being wasted in lost heat at the generating station. New methods are being studied to increase heating efficiency in gas to 100 per cent instead of the 70-80 per cent now being obtained by conventional gas-heating systems. It seems likely that, from the manufacturing angle, the electric heat pump is "several jumps" ahead of the gas

heat pump; Mr. Chandler does not indicate exactly how far along the gas industry may be towards developing its gas heat pump.

He forecasts the following ultimate saturation of major gas appliances by 1975 as compared with the present situation, the data being for his own company only:

	1955	*1975*
Gas Ranges	95%	80%
Water Heaters	72	
Space Heating	38	75
Refrigerators	8	(?)
Clothes Dryers	7	25
Incinerators	—	12
Air Conditioning	—	10

Using these saturation figures, he forecasts an average residential consumption for Northern Illinois Gas at 1,534 therms in 1975 compared with 826 therms in 1954, an increase of 85 per cent. He also made the forecasts shown in the table below for the over-all growth of his company's business.

CONSIDERABLE research is being done on development of gas appliances. The AGA is spending about $200,000 a year and some of its findings are being incorporated in actual appliances, to aid manufacturers in visualizing the improvement. As a result of this research, a greatly improved gas range should be available in the near future. This will permit automatic temperature control of all burners, and ovens and broilers will be greatly improved.

Much research is also being done by individual utilities on the problem of getting the gas to the consumers' premises. He describes this progress as follows:

> Economical high-pressure storage methods, improved methods of prolonging the life of existing mains, automatic means of testing gas meters, economical peak load supplies of gas from existing water-gas generating equipment, development of a method of applying automatic computing machines for solving flow patterns and distribution main sizes for anticipated increased loads such as caused by house heating, and many others.

Northern Illinois Gas has been conducting very successful tests of a method of sealing leaks in mains from the inside at a great cost saving.

Research on coal gasification is being conducted by the Department of Interior at an experiment station in West Virginia. Others engaged in such research are Pittsburgh Consolidation Coal, M. W. Kellogg Company, Hydrocarbon Research, Inc., the Institute of Gas Technology, and some of the larger oil companies.

AGA is spending about $1,500,000 a year in the so-called PAR program (promotion, advertising, and research). AGA laboratories are also assisting manufacturers by testing appliances and accessories, about 6,000 being tested last year. Over 5,000,000 ranges, water heaters, and house-heating equipment were sold last year, and this volume of business

	Number of Residential Customers	*Residential Sales Including House Heating (Millions of Therms)*	*Total Firm Gas Sales*
1950	360,000	190	285
1955	470,000	420	580
1975	840,000	1,310	1,580
% Increase 1955-75	79%	212%	172%

gives the manufacturer an incentive to promote his products.

The utility companies themselves are becoming more aggressive in the sale of gas appliances. Many who left this field several years ago because of the pressure of other problems (such as conversion to natural gas) are now returning to direct sale of appliances or closer sales cooperation with dealers.

Uptrend in Money Rates

THE current period of record-breaking prosperity and capital expansion seems to be slowly forcing money rates higher. As indicated in the accompanying table "Yield Yardsticks" below, bond yields are currently at about the highest levels for 1955, though still somewhat below 1954 highs. Utility preferred stock yields, however, are a little below the recent highs, perhaps due to the small amount of preferred stock financing in recent weeks.

The yield on long-term taxable government bonds has advanced to 2.83 per cent from the low of 2.62 per cent earlier this year and last year's low of 2.41 per cent. However, it is still well below the high of 3.15 per cent of about two years ago, when the government's sudden "hard money" policy forced a drastic rise in money rates.

The municipal bond market has been rather hard hit by the pressure of unsold offerings and the attempt to market large new turnpike and housing issues. Conditions were improved somewhat recently by rejection of the only bid for the $125,000,000 New York Thruway bonds, but the market now faces a housing bond flotation almost as large.

WITH bank loans defying the usual seasonal pattern and rising over $1 billion in the first half of 1955, bank officials in New York anticipate the first general rise in interest rates on business loans in over two years, possibly early in September. The prime rate was raised from 3 per cent to 3¼ per cent in early 1953 but was later cut back to 3 per cent.

Utilities Join "How to Invest" Show

A "HOW TO INVEST" show was staged recently at the New York City Armory at 34th street and Park avenue by Merrill Lynch, Pierce, Fenner & Beane, and a number of large companies. There were some 40,000 square feet of displays, and during a week the show attracted 90,000 visitors. It included displays by

CURRENT YIELD YARDSTICKS

	*July 8, 1955**	*1955 Range*		*1954 Range*		*1953 Range*	
		High	*Low*	*High*	*Low*	*High*	*Low*
U.S. Long-term Bonds—Taxable	2.83%	2.83%	2.62%	2.70%	2.41%	3.15%	2.70%
Utility Bonds—Aaa	3.09	3.09	2.93	3.13	2.86	3.43	3.01
Aa	3.13	3.13	2.99	3.19	2.92	3.59	3.07
A	3.22	3.22	3.12	3.37	3.11	3.72	3.23
Baa	3.43	3.43	3.37	3.72	3.37	3.94	3.50
Utility Preferred Stocks—High-grade	3.95	3.98	3.89	4.09	3.85	4.45	4.01
Medium-grade	4.22	4.29	4.19	4.51	4.17	4.87	4.43
24 Electric Utility Common Stocks	4.49	4.58	4.37	5.23	4.50	5.72	5.01
30 Gas Utility Common Stocks	4.46	4.70	4.29	5.22	4.64	5.66	4.74

*Approximate date.
Latest available Moody indices are used for utility bonds and stocks; Standard & Poor's index for government bonds.

four important industrial companies (General Motors, General Electric, General Foods, and International Business Machines) and two utility companies (American Gas & Electric and New York Telephone).

General Electric displayed some of its man-made industrial diamonds, an electric kitchen of the future, a scale model of an atomic reactor plant, new jet engines, etc. General Motors showed its futuristic car "Le Sabre." IBM showed how an electronic "brain" could compute the results of buying selected stocks at various stages of the market.

New York Telephone Company displayed its new "solar batteries" that obtain energy from sunlight (already being used experimentally on rural lines), a description of the new transatlantic cable project, and a device to let visitors see themselves on TV. Also shown was an animated replica of the Boston attic where Alexander Graham Bell invented the telephone—a model of this phone was activated so that visitors could talk over it. There was also a complete line of the new colored telephones, a loud-speaker phone for use without picking up the receiver, and other novel devices. Attendants showed how a phone call could be dialed through to an individual phone in San Francisco.

AMERICAN GAS & ELECTRIC, largest producer of power in the world, presented a major exhibit on "Electricity, the Lifeblood of America." A large photograph of a power plant showed a giant heart pumping electricity through simulated arteries to the home, farm, factory, and store. There was also a film on the history of electricity: Starting with a teakettle producing steam to turn a pin wheel which revolved a magnet between coils of wire—the simplest method of producing electricity—the film showed how these basic principles have been incorporated into modern, large steam-electric generating stations. The film illustrated how AGE's research has led to the nation's first 330,000-volt transmission network—highest voltage network in operation in the United States today.

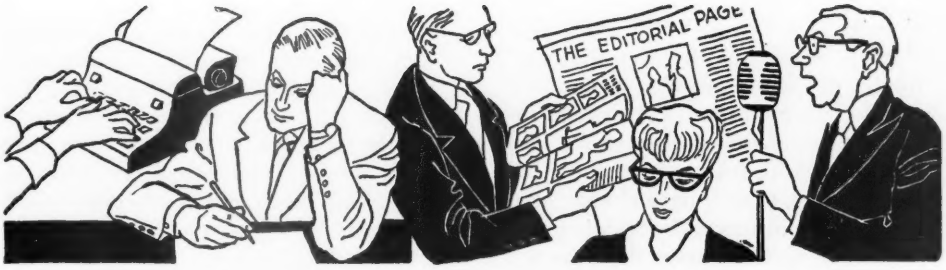
DATA ON ELECTRIC UTILITY STOCKS

1954 Rev. (Mill.)			*7/13/55 Price About*	*Div. Rate*	*Current Yield*	*Share Earnings* Cur. Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Dividend Pay-out*	*Common Stock Equity*
$230	S	Amer. Gas & Elec.	45	$1.80	4.0%	$2.73	13%	May	16.5	66%	33%
35	O	Arizona Pub. Serv.	26	1.00	3.8	1.52	11	May	17.1	66	28
9	O	Arkansas Mo. Power	25	1.24a	5.0	1.86	24	Mar.	13.4	67	30
27	S	Atlantic City Elec.	43	1.60b	3.7	2.20	15	May	19.5	73	30
107	S	Baltimore G. & E.	34	1.60	4.7	1.98	29	Mar.	17.2	81	37
5	O	Bangor Hydro-Elec.	35	1.80	5.1	2.30	8	Mar.	15.2	78	33
4	O	Black Hills P. & L.	26	1.28	4.9	2.15	4	April	12.1	60	26
86	S	Boston Edison	58	2.80	4.8	3.12	5	Dec.	18.6	90	53
17	A	Calif. Elec. Power	15	.70	4.7	.76	D6	Mar.	19.7	92	34
17	O	Calif. Oregon Power	31	1.60	5.2	1.97	23	May	15.7	81	36
7	O	Calif.-Pacific Util.	30	1.40	4.7	2.21	10	May	13.6	63	30
54	S	Carolina P. & L.	24	1.10	4.6	1.57	14	May	15.3	70	32
23	S	Cent. Hudson G. & E.	17	.76	4.5	1.02	26	Mar.	16.7	75	33
16	O	Cent. Ill. E. & G.	40	1.80	4.5	2.72	36	Mar.	14.7	59	32
30	S	Cent. Ill. Light	52	2.20	4.2	3.10	10	May	16.8	71	40
46	S	Cent. Ill. P. S.	28	1.40	5.0	2.13	44	Mar.	13.1	66	33
10	O	Cent. Louisiana Elec.	28	1.20	4.3	1.62	17	Mar.	17.3	74	30
30	O	Cent. Maine Power	26	1.40	5.4	2.03	18	May	12.8	69	30
105	S	Cent. & South West	35	1.32	3.8	1.90	15	Mar.	18.4	69	33
10	O	Cent. Vt. P. S.	18	.92	5.1	1.30	35	May	13.8	71	30
95	S	Cincinnati G. & E.	29	1.20	4.1	1.78	13	Mar.	16.3	67	37

1954 Rev. (Mill.)		(Continued)	7/13/55 Price About	Div. Rate	Current Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
6	O	Citizens Util.	16	.48h	6.0h	1.07	5	Mar.	15.0	45	38
91	S	Cleve. El. Illum.	38	1.60	4.2	1.99	D3	Mar.	19.1	65	44
3	O	Colo. Cent. Power	29	1.20	4.1	1.63	15	Mar.	17.8	74	39
35	S	Columbus & S. O. E.	32	1.60	5.0	1.97	3	Mar.	16.2	81	33
310	S	Commonwealth Edison	43	2.00	4.7	2.78	32	Mar.	15.5	72	49
10	A	Community Pub. Serv.	24	1.00#	4.2	1.76	13	Mar.	13.6	57	49
2	O	Concord Electric	40	2.40	6.0	2.64	6	Dec.	15.2	91	63
60	O	Connecticut L. & P.	19	.98	5.2	1.14	5	May	16.7	86	38
19	O	Connecticut Power	44	2.25	5.1	2.56	10	Mar.	17.2	88	41
474	S	Consol. Edison	49	2.40	4.9	2.96	2	Mar.	16.6	81	43
170	S	Consumers Power	50	2.20	4.4	3.23	8	May	15.5	68	42
61	S	Dayton P. & L.	44	2.00	4.5	3.01	1	Mar.	14.6	66	36
31	S	Delaware P. & L.	36	1.50	4.2	2.17	14	Mar.	16.6	69	35
196	S	Detroit Edison	37	1.60	4.3	2.25	17	May	16.4	71	45
113	A	Duke Power	54	2.00	3.7	3.21	1	Mar.	16.8	62	53
81	S	Duquesne Light	35	1.80	5.1	2.11	1	Mar.	16.6	85	32
27	O	Eastern Util. Assoc.	37	2.20	5.9	2.38	9	May	15.5	92	33
2	O	Edison Sault Elec.	15	.80	5.3	1.04	27	Dec.	14.4	77	49
10	O	El Paso Elec.	41	1.60	3.9	2.39	12	May	17.2	67	37
10	S	Empire Dist. Elec.	27	1.40	5.2	1.88	D11	Mar.	14.4	74	32
4	O	Fitchburg G. & E.	53	3.00	5.7	3.26	16	Dec.	16.3	92	53
38	S	Florida Power Corp.	43	1.60	3.7	2.25	11	Mar.	19.1	71	30
79	S	Florida P. & L.	39	1.00	2.6	1.90	28	Mar.	20.5	53	35
163	S	General Pub. Util.	36	1.70	4.7	2.51	11	Mar.	14.3	68	39
6	O	Green Mt. Power	31	1.80	5.8	2.23	24	May	13.9	81	39
47	S	Gulf States Util.	35	1.40	4.0	1.97	5	May	17.8	71	30
20	A	Hartford E. L.	61	2.75	4.5	3.70	10	Mar.	16.5	74	47
5	O	Haverhill Elec.	44	2.15†	4.9	1.95	D35	Dec.	22.6	110	100
58	S	Houston L. & P.	42	1.20	2.9	2.21	16	May	19.0	54	40
7	O	Housatonic P. S.	26	1.40	5.4	1.58	20	Dec.	16.5	89	46
23	S	Idaho Power	31	1.10	3.5	1.83	9	Mar.	16.9	60	35
70	S	Illinois Power	53	2.20	4.2	3.23	28	May	16.4	68	35
37	S	Indianapolis P. & L.	26	1.20	4.6	1.70	6	Mar.	15.3	65	35
18	S	Interstate Power	14	.70	5.0	1.00	8	Mar.	14.0	70	30
27	O	Iowa Elec. L. & P.	27	1.25	4.6	1.91	16	May	14.1	65	30
31	S	Iowa-Ill. G. & E.	34	1.80	5.3	2.34	12	May	14.5	77	39
31	S	Iowa Power & Lt.	27	1.40	5.2	1.89	D1	Mar.	14.3	74	30
27	O	Iowa Pub. Service	16	.80	5.0	1.06	5	May	15.1	75	29
12	O	Iowa Southern Util.	23	1.20	5.2	1.59	10	May	14.5	75	38
51	S	Kansas City P. & L.	41	1.80	4.4	2.33	10	May	17.6	77	34
25	S	Kansas G. & E.	26	1.20	4.6	1.98	12	May	13.1	61	31
36	S	Kansas Pr. & Lt.	24	1.20	5.0	1.56	13	Mar.	15.4	77	26
35	O	Kentucky Util.	28	1.20	4.3	2.30	25	Mar.	12.2	52	33
6	O	Lake Superior D. P.	23	1.10	4.8	1.44	1	Mar.	16.0	76	37
5	O	Lawrence Elec.	28	1.60	5.7	1.40	D25	Dec.	20.0	77	63
77	S	Long Island Ltg.	22	1.00	4.5	1.26**	NC	May	17.4	79	32
41	S	Louisville G. & E.	53	2.00	3.8	3.53	4	Mar.	15.0	57	34
7	O	Lowell Elec. Lt.	58	3.30†	5.7	3.04	D19	Dec.	19.1	109	65
8	O	Lynn G. & E.	30	1.60	5.3	2.01	D7	Dec.	14.9	80	75
7	O	Madison G. & E.	44	1.60	3.6	3.20	2	Dec.	13.8	50	53
3	A	Maine Pub. Service	19	1.08	5.7	1.48	33	May	12.8	73	35
4	O	Michigan G. & E.	41	1.35h	6.3h	3.42	17	Mar.	12.0	39	31
144	S	Middle South Util.	33	1.50	4.5	2.20	12	May	15.0	68	35
24	S	Minnesota P. & L.	26	1.20	4.6	1.78	D5	May	14.6	67	35
2	O	Miss. Valley P. S.	28	1.40g	5.0	2.50	15	June	11.2	56	30
10	A	Missouri Pub. Ser.	13	.60	4.6	.81	D10	May	16.0	74	28
5	O	Missouri Util.	28	1.36	4.9	1.89	19	Mar.	14.8	72	35
31	S	Montana Power	39	1.60	4.1	2.72	4	May	14.3	59	36
122	S	New England Elec.	17	.90	5.3	1.23**	—	Mar.	13.8	73	34
38	O	New England G. & E.	18	1.00	5.6	1.32**	D1	May	13.6	76	37
43	O	New Orleans P. S.	45	2.25	5.0	2.66	5	May	16.9	85	39
2	O	Newport Electric	42	2.00	4.8	2.61	D1	May	16.1	77	34
73	S	N. Y. State El. & Gas.	41	2.00	4.9	2.73	2	May	15.0	73	35
210	S	Niagara Mohawk Pr.	33	1.60	4.8	2.17	5	Apr.	15.2	74	34
68	O	Northern Ind. P. S.	37	1.60	4.3	2.62	19	May	14.1	61	34
118	S	Northern Sts. Power	17	.80	4.7	1.11	9	Mar.	15.3	72	33

1954 Rev. (Mill.)		(Continued)	7/13/55 Price About	Div. Rate	Current Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
9	O	Northwestern P. S.	16	.90	5.6	1.31	7	Mar.	12.2	69	27
110	S	Ohio Edison	50	2.20	4.4	3.25	12	May	15.4	68	41
40	S	Oklahoma G. & E.	37	1.60	4.3	2.17	36	May	17.1	74	30
14	O	Otter Tail Power	30	1.60	5.3	2.01	4	May	14.9	80	31
386	S	Pacific G. & E.	52	2.20	4.2	3.10	15	Mar.	16.8	71	39
40	O	Pacific P. & L.	26	1.30	5.0	1.57	D3	Mar.	16.6	83	28
109	S	Penn Power & Lt.	48	2.40	5.0	2.95	6	May	16.3	81	29
196	S	Phila. Elec.	40	1.80	4.5	2.30	5	Apr.	17.4	78	36
29	O	Portland Gen. Elec.	24	1.10	4.6	1.56	20	Apr.	15.4	71	42
52	S	Potomac Elec. Power	22	1.00	4.5	1.21	4	May	18.2	83	36
63	S	Pub. Serv. of Colo.	45	1.80	4.0	2.52	8	Mar.	17.9	71	34
250	S	Pub. Serv. El. & Gas	32	1.60	5.0	2.12**	14	Mar.	15.1	75	31
62	S	Pub. Serv. of Indiana	42	2.00	4.8	2.44	5	May	17.2	82	34
23	O	Public Serv. of N. H.	18	.90	5.0	1.39	58	May	12.9	65	33
10	O	Public Serv. of N. M.	15	.68	4.5	.96	55	Mar.	15.6	71	31
21	S	Puget Sound P. & L.	37	1.72	4.6	2.11	12	Mar.	17.5	82	58
49	S	Rochester G. & E.	47	2.24	4.8	3.25	D2	Mar.	14.5	69	34
14	O	Rockland L. & P.	19	.60	3.2	.83	36	Dec.	22.9	72	29
7	S	St. Joseph L. & P.	25	1.32	5.3	1.77	2	Mar.	14.1	75	43
39	S	San Diego G. & E.	18	.80	4.4	1.03	D2	May	17.5	78	44
8	O	Sierra Pacific Pr.	45	2.00	4.4	2.85	30	May	15.8	70	28
154	S	So. Calif. Edison	54	2.40	4.4	3.05	29	Mar.	17.7	79	37
34	S	So. Carolina E. & G.	19	.90	4.7	1.29	15	May	14.7	70	28
6	O	Southern Colo. Power	15	.70	4.7	1.23	NC	Apr.	12.2	57	41
194	S	Southern Company	20	.90	4.5	1.33	6	May	15.0	68	29
14	S	Indiana G. & E.	33	1.50	4.5	2.43	21	May	13.6	62	34
4	O	So. Nevada Power	19	.80	4.2	1.48	45	Dec.	12.8	54	64
1	O	Southern Utah Pr.	16	1.00	6.3	.93	7	May	17.2	108	39
3	O	Southwestern E. S.	21	1.00	4.8	1.65	9	May	12.7	61	31
33	S	Southwestern P. S.	29	1.32	4.6	1.58	10	May	18.4	84	30
20	A	Tampa Elec.	28	1.00	3.6	1.51	23	May	18.5	66	36
117	S	Texas Utilities	74	2.32	3.1	4.00	19	May	18.5	58	37
35	S	Toledo Edison	15¼	.70	4.5	.97	14	Mar.	16.0	72	29
11	O	Tucson G. E. L. & P.	30	1.04	3.5	1.76	25	Mar.	17.0	59	40
114	S	Union Elec. of Mo.	29	1.40	4.8	1.69	19	Mar.	17.2	83	36
28	O	United Illuminating	53	2.55†	4.8	3.13	8	Dec.	16.9	81	51
4	O	Upper Peninsula Pr.	27	1.40	5.2	2.38	60	Dec.	11.3	59	31
32	S	Utah Power & Lt.	48	2.20	4.6	3.12	28	May	15.4	71	41
96	S	Virginia E. & P.	40	1.60	4.0	2.41	34	May	16.6	66	32
23	S	Wash. Water Power	41	1.70	4.1	1.97	8	May	20.8	86	35
116	S	West Penn Elec.	26	1.32	5.1	1.94	9	May	13.4	68	27
64	O	West Penn Power	49	2.40	4.9	3.05	13	Mar.	16.1	79	33
10	O	Western Lt. & Tel.	32	1.60	5.0	2.49	29	May	12.9	64	27
22	O	Western Mass. Cos.	42	2.20	5.2	2.98	8	Apr.	14.1	74	51
88	S	Wisc. El. Pr. (Cons.)	33	1.50	4.5	2.15	12	Mar.	15.3	63	40
35	O	Wisconsin P. & L.	26	1.28	4.9	1.76	—	Mar.	14.8	73	34
31	S	Wisconsin Pub. Serv.	23	1.10	4.8	1.57	13	Mar.	14.6	70	34
		Averages			4.6%				15.7	72%	
		Foreign Companies									
186	S	American & Foreign Pr.	14	$ .75(e)	5.4%	$1.90	D25%	Dec.	7.4	39%	48%
137	A	Brazilian Trac. L. & P.	8	—	—	1.26	D6	Dec.	6.3	—	70
56	A	British Columbia Pr.	35	1.00	2.9	1.62	16	Dec.	21.6	62	28
16	A	Gatineau Power	34	1.20	3.5	1.99	12	Dec.	17.1	60	30
10	A	Quebec Power	31	1.20	3.9	1.56	20	Dec.	19.9	77	44
45	A	Shawinigan Water & Pr.	71	1.45	2.0	2.84	25	Dec.	25.0	51	35

B—Boston Exchange. A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *If additional common shares have been recently offered, earnings are adjusted to give effect to the offering. Percentage change is in the net income available for common stock. **Based on average number of shares. a—Also 8 per cent stock dividend. b—Also 5 per cent stock dividend. c—Also 3/10 share of Northern Illinois Gas for each share of Commonwealth Edison. e—Includes 15 cents extra. g—Also 10 per cent stock dividend January 31, 1955. h—Also regular annual 3 per cent stock dividend, which is included in the yield. †Estimated. #—Also occasional stock dividends.



What Others Think

Senator Questions Validity of TVA Steam Plants

For the first time in recollection, Congress this year put together a catch-all public works appropriation bill. As enacted, it included funds for the civil functions of the Army, to which had been added money for reclamation and other types of public works, including the Tennessee Valley Authority. Especially in considering the TVA item, Congress was facing again a question of fundamental principle as well as policy. Though, to many, the problem appeared to be what to do with Dixon-Yates, there were others, including Senator Robertson (Democrat, Virginia), who recognized the more basic issue: what was to be done with TVA in light of constitutional principles, as the power needs of the area it serves are constantly increased.

As to the immediate issue before Congress, Senator Robertson, in a thoughtful speech inserted in the *Congressional Record* of July 6th, had this to say:

> Some want the government to build a steam plant for the TVA at Fulton, Tennessee, or, in any event, to strike out the item for a transmission line without which a steam plant proposed to be built by the Dixon-Yates private utility group in Arkansas could not furnish power to TVA.
>
> Others want to retain the item for the transmission line across the Mississippi river because they prefer the authorized proposal of the Dixon-Yates group to build the plant with private funds.

Each of these plants would be for the avowed purpose of furnishing power needed for operations of the Atomic Energy Commission. Justification for financial backing of the federal government, directly for construction costs in one case and indirectly through annual payments for power which would amortize the cost in the other case, is claimed, therefore, because the power would be used by an authorized agency of the government. Actually no plant on either side of the Mississippi river near Memphis would furnish power for atomic energy operations in Kentucky except theoretically through a bookkeeping transaction.

The city of Memphis now gets its power from the TVA system. The ability of that system to supply power from its present sources is limited. If future needs of the AEC are to be met, more power will be required and if it is supplied by TVA that agency will have to have new power sources or take some power away from present users. If either the proposed Fulton TVA

plant or the Dixon-Yates plant provided power for use by Memphis, that would release an equivalent amount for use elsewhere on the TVA system, including the atomic energy plants. On the other hand, the needs of the AEC could be met, as they have already been met in some instances, by building new power plants at or near the point of demand; and if this were done the need which is claimed for the plants in the Memphis area would not exist.

Obviously, therefore, the real purpose of either the Fulton TVA or the Dixon-Yates plant would be to furnish power for Memphis, Tennessee, and the Congress now finds itself engaged in a controversy over which source of power it shall choose to serve an independent city in a sovereign state.

SUCH was the situation facing Congress, as analyzed by the junior Senator from Virginia. He did not attempt to discuss the specific pros and cons of policy, however, preferring to direct his remarks to an analysis of the basic constitutional principle involved. What is happening to a central government of limited powers, such as was intended by the founders of the nation, he asks, when Congress undertakes to solve the electric power supply problem of a single city by use, either directly or indirectly, of tax revenues collected from citizens of the whole United States? And where will such actions lead us? Senator Robertson continues:

> To answer that question it is necessary, I believe, to review the history of the general welfare clause of the Constitution of the United States, the only source from which the authority we are proposing to exercise could possibly come. I believe that such a review will indicate how far we already have moved away from the concept of a federal government of limited powers such as was envisioned by James Madison and Andrew Jackson and how grave is the responsibility now resting on members of the Congress to check our course before we confirm the prediction of Lord Macaulay that our Constitution would prove to be all sail and no anchor.

Senator Robertson admitted that he had called on Lloyd Wright, president of the American Bar Association, and on F. D. G. Ribble, dean of the University of Virginia Law School, in the hope that they could furnish proof that Congress could not go beyond a certain point in operating or even financing commercial activities, but was disappointed to find that, in general, Congress cannot make the Supreme Court "the keeper of its conscience."

As Dean Ribble put it:

> The spending power, as the Supreme Court held in Frothingham *v.* Mellon (1923) 262 US 447, cannot be tested directly by citizens in the courts. Here the Constitution in practical fact is to be applied by the Congress or not at all. Members must recognize this obligation to the Constitution and to the oath they have taken. Unless they follow their duty as interpreters of the Constitution, it will surely lose meaning and its power. They may surrender, by careless acts, day by day, the basic and fundamental instrument of this government.

THAT fewer such careless acts be committed, the Senator from Virginia suggests that members of Congress should review periodically the principles of the Constitution and their particular application to current problems. The purpose of his speech, he said, was to "see whence we derive the power which would be exercised in handling this public works bill, and

"OKAY, IF YOU INSIST WE HAVE TO INCREASE THE RATE LET'S DO IT IN YOUR PART OF TOWN!"

what moral, if not legal, limitations are imposed by a clear understanding of constitutional limitations."

The Constitution of the United States provides in Article 1, § 8, clause 1, that "The Congress shall have power to lay and collect taxes, duties, imposts, and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts, and excises shall be uniform throughout the United States." The phrase "general welfare" also appears in the preamble to the Constitution. The problem under consideration, Senator Robertson states, is to determine what power has been conferred upon Congress under this clause. Has Congress the unlimited power to provide for the general welfare; that is to say, to enact any laws it might conceive were for the general welfare of the United States?

According to U. S. Senator Robertson:

Apparently no one ever has seriously contended that the framers of the Constitution intended to grant to Congress a blanket separate power to provide unrestrictedly for the general welfare. Those who oppose the adoption of the Constitution pending its ratification suggested that this provision empowered the Congress to enact any laws it might conceive were for the general welfare of the United States, but the two main contemporary authorities, Alexander Hamilton and James Madison, in the Federalist papers and in their other writings, have given us the two interpretations which subsequently have been followed. Hamilton gave the clause a rather broad construction and Madison a more narrow one, but even under Hamilton's view the spending power of Congress is quite restricted; namely, a limited power to appropriate money for the general welfare. The classic statement of Hamilton relative to the general welfare clause is found in his report on manufactures rendered in 1791:

"The phrase is as comprehensive as any that could have been used, because it was not fit that the constitutional authority of the Union to appropriate its revenues should have been restricted within narrower limits than the general welfare, and because this necessarily embraces a vast variety of particulars which are susceptible neither of specification nor of definition. It is, therefore, of necessity left to the discretion of the national legislature to pronounce upon the objects which concern the general welfare, and for which, under that description, an appropriation of money is requisite and proper. And there seems to be no room for a doubt that whatever concerns the general interest of learning, of agriculture, of manufactures, and of commerce are within the sphere of the national councils, as far as regards an application of money.

"The only qualification of the generality of the phrase in question which seems to be admissible is this: That the object to which an appropriation of money is to be made must be general, and not local; its operation extending in fact or by possibility, throughout the Union, and not being confined to a particular spot."

UNDER Hamilton's interpretation, Senator Robertson explained, while Congress may not legislate generally with respect to any matter which concerns the general welfare, it may appropriate money for any purpose concerning the general welfare. Under the narrower view of Madison, the first clause of Article 1, § 8, is coextensive with and limited by the powers expressly conferred on Congress in the remaining clauses of § 8. The Senator said that, under Madison's interpretation, Congress can appropriate money for the general welfare only in so far as the appropriation may be incidental to its other expressly delegated powers, such as the power to regulate commerce and the power to establish post offices and post roads. Madison's argument was that where general words or phrases are followed by special words or phrases, the general words are limited by the special words. This argument, Senator Robertson pointed out, is analogous to the legal principle of *ejusdem generis* under which in the construction of laws, wills, and other legal instruments it commonly is held that where general words follow words of a particular and specific meaning, such general words are not to be construed in their widest extent, but are held to be limited to persons or things of the

same general kind or class as those specifically mentioned.

Madison set forth his argument relative to the general welfare phrase as limited by the succeeding clauses of § 8 in No. 41 of the Federalist papers. He said:

> Had no other enumeration or definition of the powers of Congress been found in the Constitution than the general expressions just cited, the authors of the objection might have had some color for it. . . .
>
> But what color can the objection have, when a specification of the objects alluded to by these general terms, immediately follows; and is not even separated by a longer pause than a semicolon? If the different parts of the same instrument ought to be so expounded as to give meaning to every part which will bear it; shall one part of the same sentence be excluded altogether from a share in the meaning; and shall the more doubtful and indefinite terms be retained in their full extent, and the clear and precise expressions be denied any significance whatsoever? For what purpose could the enumeration of particular powers be inserted, if these and all others were meant to be included in the preceding general power?

THE first Chief Justice of the United States Supreme Court, John Marshall, shared the views of Hamilton, Madison, and Jefferson that clause 1 of § 8 simply granted to Congress the power to tax in order to provide for the general welfare and did not grant a broader power to legislate substantively for the general welfare. Senator Robertson finds it significant that in Marshall's opinion in the landmark case of Gibbons *v.* Ogden ((1824) 9 Wheat 1, 199, 6 L ed 23, 71), in discussing the grant of the power to lay and collect taxes, he remarked in passing, as if there were no question about it: "Congress is authorized to lay and collect taxes, etc., to pay the debts and provide for the common defense and general welfare of the United States."

Senator Robertson continued in his remarks on the Senate floor:

> Under Jackson, congressional spending for roads and canals came to an abrupt close.
>
> Between 1845 and the Civil War, a period when the doctrine of states' rights was at its peak in acceptance, the Presidents generally leaned toward the view of Madison that the general welfare clause was limited by and coextensive with the specific powers subsequently enumerated in § 8. Prominent among these were Polk, Pierce, and Buchanan. (See, 5 Richardson, *Messages and Papers of the Presidents,* 20, 90, 218, 259, 457.) It was Pierce who began the practice of grounding measures upon the war power as a means of justifying an appropriation. The last President to follow Madison was Buchanan, who, in February, 1859, in vetoing a bill to establish land-grant colleges in each state, declared that federal moneys were for the purpose of raising and supporting armies, maintaining a navy, and the other great objects enumerated in the Constitution, and were not to be "diverted from them to pay the debts of the states, to educate their people, and to carry into effect any other measure of their domestic policy. This would be to confer upon Congress a vast and irresponsible authority, utterly at war with the well-known jealousy of federal power which prevailed at the formation of the Constitution. The natural intendment would be that as the Consti-

tution confined Congress to well-defined specific powers, the funds placed at their command, whether in land or money, should be appropriated to the performance of the duties corresponding with these powers." (5 Richardson, *Messages and Papers of the Presidents,* 547.)

WITH the advent of the Civil War and the building of the cross-continental railways there was a return to the broad construction of Hamilton. And for practical reasons, under the power to regulate commerce among the several states, Congress took the authority to establish and maintain certain highways and bridges. In so far as the Supreme Court of the United States is concerned, Senator Robertson went on, the contest between the respective interpretations of Madison or Hamilton was settled by decision in favor of Hamilton, although the decision was delayed until 1935. In that year, in United States *v.* Butler (297 US 1, 80 L ed 477), speaking through Mr. Justice Roberts, the court adopted the Hamiltonian construction. The decision held the Agricultural Adjustment Act of May 12, 1933, unconstitutional. It was sought to sustain the act under the general welfare clause. Justice Roberts said:

> The question is not what power the federal government ought to have but what powers in fact have been given by the people. It hardly seems necessary to reiterate that ours is a dual form of government; that in every state there are two governments—the state and the United States. Each state has all governmental powers save such as the people, by their Constitution, have conferred upon the United States, denied to the states, or reserved to themselves. The federal Union is a government of delegated powers. It has only such as are expressly conferred upon it and such as are reasonably to be implied from those granted. In this respect we differ radically from nations where all legislative power, without restriction of limitation, is vested in a parliament or other legislative body subject to no restrictions except the discretion of its members. . . .
>
> The clause thought to authorize the legislation—the first—confers upon the Congress power "to lay and collect taxes, duties, imports, and excises, to pay the debts and provide for the common defense and general welfare of the United States. . . . " It is not contended that this provision grants power to regulate agricultural production upon the theory that such legislation would promote the general welfare. The government concedes that the phrase "to provide for the general welfare" qualifies the power "to lay and collect taxes." The view that the clause grants power to provide for the general welfare, independently of the taxing power, has never been authoritatively accepted. Mr. Justice Story points out that if it were adopted "it is obvious that under color of the generality of the words, to 'provide for the common defense and general welfare,' the government of the United States is, in reality, a government of general and unlimited powers, notwithstanding the subsequent enumeration of specific powers." The true construction undoubtedly is that the only thing granted is the power to tax for the purpose of providing funds for payment of the nation's debts and making provision for the general welfare. . . .

THE conception of the spending power advocated by Hamilton and strongly reinforced by Story thus prevailed over

that of Madison, which had not been lacking in adherents. But, according to Senator Robertson, there were difficulties of interpretation remaining. In the words of Justice Cardozo, in Helvering *v.* Davis ((1936) 301 US 619, 640, 81 L ed 1307, 1315):

> The line had to be drawn between one welfare and another, between particular and general. . . . Where this shall be placed cannot be known through a formula in advance of the event. There is a middle ground or certainly a penumbra in which discretion is large. The discretion, however, is not confided to the courts. The discretion belongs to Congress, unless the choice is clearly wrong, a display of arbitrary power, not an exercise of judgment. This is now familiar law.

Senator Robertson pointed out that congressional power is not alone based on the general welfare clause, but also on the last clause of Article 1, § 8, which says that Congress shall have the power to make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the government of the United States, or in any department or officer thereof. The classic interpretation of this clause was given by John Marshall in McCullock *v.* Maryland ((1819) 4 Wheat 316) in the words: "Let the end be legitimate, let it be within the scope of the Constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibited, but consistent with the letter and spirit of the Constitution, are constitutional."

At this point, Senator Robertson had occasion to refer to TVA:

> The history of TVA illustrates the modern application of the "necessary and proper" clause. In Ashwander *v.* Tennessee Valley Authority ((1936) 297 US 288) constitutional authority to construct the Wilson dam was found in the powers of Congress to provide for the national defense, the dam being useful to provide electric power for the production of nitrates needed for the manufacture of explosives. Once a hydroelectric plant had been built and was not currently needed to produce materials of war, it might, of course, be retained as a reserve.
>
> The Constitution, Article IV, § 3, also provides: "The Congress shall have power to dispose of and make all needful rules and regulations with respect to the territory or other property belonging to the United States." Congress could, of course, simply maintain a large power plant in a stand-by position as a facility useful in the event of a later war. But it could also provide for the use of this power plant in the production of electricity and the sale of that electricity, and that is what it did.
>
> It would be hard to find any limitation in the Constitution or in common sense under which a properly built power plant must remain idle, a drain on the taxpayers. Congress might have handled this situation by leasing the plant to a privately owned company or by selling power at the plant to such a company. However, the choice of means of disposal under Article IV, § 3 was left to the Congress, within a wide range of discretion and it elected to use a governmental agency for distribution.
>
> The original dam was supplemented by other dams and power plants. Then, since hydroelectric power may be affected by drought and since to maintain customers there must be a steady supply of power, the next step was to

build supplemental steam plants. This, in turn, led to the building of more steam plants, not to balance the supply of hydro power but to create a better balanced distribution system and to meet the increasing needs of more power customers.

Each step in this process has been justified by reference to the "general welfare" and "necessary and proper" clauses and the section covering disposal of government property. Sooner or later, however, we must face the question of where the ultimate line of congressional discretion shall be drawn.

ONCE a national agency is authorized to maintain a power system and sell power, why cannot Congress authorize all the things which are customary or suitable to develop that system to its fullest capacity, Senator Robertson asks? Cooking schools to teach the use of electric power, stores to sell electric equipment and household appliances, and the manufacture of such equipment at reasonable prices are all possibilities. The Virginian states that Congress already has allowed the TVA to conduct studies in the utilization of the natural resources of the South, to study the best types of fertilizer, and to conduct farm demonstrations in the use of fertilizer.

He adds:

> . . . The TVA is now selling to farmers thousands of tons of fertilizer at 45 per cent of what it costs private manufacturers to produce it and next to furnishing domestic power for municipalities and individual homes at the cheapest rate east of the Mississippi river, the TVA distribution of fertilizer is one of its most popular activities which many farmers would like to see expanded on a grand scale.

And even the Atomic Energy Commission, which is headed by an able advocate of private enterprise, has concluded that its power to produce atomic energy and disseminate information concerning it included the right to set up a school to teach the principles of nuclear power to which it would invite students not only from our country but from all foreign lands and pay all of their expenses. In the committee report filed with the pending bill you will see a reference to that activity and a warning to the Atomic Energy Commission that it shall not turn that school into a full-fledged college with dormitories, classrooms, etc., without the subsequent approval of the Joint Congressional Committee on Atomic Energy and the Appropriations committees of the Congress.

If all these things are approved one might argue that Congress should go still further and provide for the mining of coal, limestone, and iron ore to produce steel for the manufacture of electrical equipment and for the mining of copper and the manufacture of wires and cables.

IN other words, the Virginia Democrat fears that there is available under the broadest interpretation of these clauses of the Constitution a means by which Congress could take over any industry in the United States and all collateral industries which supply it with necessary raw materials or fabricated products. The seriousness of this fact, he contends, is emphasized by the difficulties which face citizens or corporations inclined to challenge congressional actions and by the reluctance of the courts to define the limits of congressional power.

In the opinion of the Senator:

> We are inclined to think of it [the so-called American doctrine of judicial

"WE DON'T HAVE AS MANY CHARTS AND GRAPHS AS WE'D LIKE FOR THE RATE HEARINGS, SO MAKE THEM BIG AND BRIGHT"

supremacy] particularly in times like these when areas of the nation are struggling with a problem created by a court decision which will change the whole structure of social life. This does not mean, however, that Congress can leave all constitutional questions to the Supreme Court.

As to the courts, Senator Robertson said, it is notable that from the beginning of the government until the end of the Civil War, there were only two cases wherein an act of Congress was held invalid by the court. From 1865 to 1937, according to the Virginian, such cases averaged about one a year. But since 1937, there has been so sharp a change that that year has been referred to as marking a constitutional revolution involving the renunciation of judicial power.

The Virginian stated he had located only three cases holding acts of Congress

invalid since 1936. It is thus apparent, he maintains, that the court has not relieved Congress of its constitutional obligation. In a vast and wide range of situations, he declares, a constitutional question can never come before the Supreme Court. Where the question may reach the court, it "will avoid it if possible" and deal with it, if at all, "only as a last resort." The individual citizen plainly can find only limited protection through court decisions and presidential vetoes from unconstitutional actions of Congress, particularly as applied to the spending power, the Virginian declared. He must look to the consciences of the members of Congress, whom he elects, as his chief bulwark.

If a possible condition of government, in which elections were a mere barter of promises of government appropriation and in which candidates promising the most government support were most popular with the voters, has not yet materialized, Senator Robertson stated, it is at least partially because members of Congress have placed loyalty to constitutional principles above expediency. But pressures to use federal spending power for the benefit of special interest groups, localities, and regions continue, and, in Congress itself, Senator Robertson warned, the struggle to preserve the essential principles of a limited constitutional government is not over.

And Senator Robertson concluded with this thought:

> I, for one, shall approach our decisions on that [the public money appropriations] bill believing that there is nothing we can do to promote the general welfare of our nation so surely as limiting federal spending to those functions which are essential and which cannot be handled by private enterprise or by localities or states.
>
> So, if Memphis wants to build a steam plant to furnish its own power, that will have my full approval. And if the Atomic Energy Commission needs more power at Paducah or anywhere else, let the government build the plant where the power is needed for government use. But, for the production of power solely for commercial purposes, let us recognize our oath to support and defend a Constitution that is dedicated to the principle of individual enterprise.

—E. W. P.

Private Power and Niagara

Public power advocates in New York, from former Governor Dewey to Senator Lehman, always represent public development of Niagara power as a traditional policy of both parties, supported by an overwhelming majority of New Yorkers. For this reason, statements made by the State Grange, the Farm Bureau Federation, the CIO Utility Workers Union, and other labor organizations before the House and Senate Public Works committees merit more attention than they, perhaps, have been receiving. When state and local governments are beating the bushes for more taxes, they say, it is no time to encourage tax-free and publicly subsidized power plants that touch in no way any other government function. Especially, the Grange points out, when New York domestic and farm electric rates are now below the cost of government-operated plants like the Grand Coulee and Hoover dams.

The following are excerpts from statements made before the Senate committee during recent hearings.

As Leland D. Smith, master, New York State Grange, put it:

> The whole subject of private development of Niagara power seems to boil down to the decision between two issues: (1) state-owned and -controlled, subsidized power, or
>
> (2) Power produced under the management of companies or corporations, built by the sale of bonds which are not tax exempt, operated by these companies or corporations which will pay into the local, state, and national treasuries several millions of dollars in taxes yearly.
>
> This will be done at a time when the local municipalities and New York state government are casting about desperately to broaden the tax base, also at a time when federal government is turning thumbs down on the sale of tax-exempt bonds.
>
> We of the Grange believe that the Niagara power should be developed by private enterprises for a good many reasons:
>
> 1. It is purely a power project. It does not involve navigation, flood control, reclamation, or irrigation.
>
> 2. The project is simply an addition to the existing hydroelectric development at Niagara in which private enterprise pioneered some sixty years ago.
>
> 3. A government-constructed and -controlled project at Niagara opens the way for government control in all types of enterprises and industry, including the farming industry, and you are all familiar with the fact that the farming industry, especially in New York, would much prefer to do its own thinking.
>
> 4. Private development at Niagara would involve, I understand, the expenditure of approximately 400 millions of dollars which would be used for the purchase of goods and services necessary to the erection and maintenance of such a development.
>
> This, we think would be much preferred rather than having 400,000,000 of tax-exempt bonds issued because we need the same 23,000,000 tax dollars that would flow from such a development each year.
>
> 5. Unlike certain undeveloped areas of the country which have been granted tax subsides in the form of tax-free power, New York state is a fairly well-developed area, and does not require any tax subsidy at the expense of the general taxpayer with the incumbent governmental restrictions that certainly go along with a subsidy.
>
> 6. The millions of people in New York state are well served by the present private utilities.
>
> 7. We cannot see where government operation would be at all valuable from a monetary standpoint, because our average residential and farm electric rates per kilowatt-hour are now below the cost of government-operated plants such as Coulee and Hoover.
>
> Our average residential rate is .023 cents per kilowatt-hour. The farm electric rate is .0196 cents. The average amount used residentally is 2,685 kilowatt-hours per month, and the average farm consumption is 5,550 kilowatt-hours, in contrast to the national average of 2,690 kilowatt-hours. The price per kilowatt-hour has been steadily declining with the increased use of power in New York state, and, of course, is very unlikely to advance because of the watchful eye of the public service commission, which as you all know has jurisdiction over the rate structure.

NATIONAL labor organizations owed a great deal to the New Deal. It is natural, therefore, that they should sup-

port programs for federal or state development of Niagara power. But New York utility worker unions did not do so at the hearings. Nor did Andrew J. McMahon, chairman of the national power committee of the Utility Workers of America, CIO.

Mr. McMahon summed up the opposition of the CIO Utility Workers Union under three headings:

1. Unions cannot bargain collectively with any government or governmental agency. Unions, in the true meaning of the term, cannot exist where government is the employer.

2. Employees of government do not get the same rates of pay prevailing in the area even where special legislation covering the building trades only (the Bacon-Davis Act) requires such payment.

3. Users of public power do not pay the same prices that users of privately generated power pay because government and governmental agencies are relieved in whole or in part from the burden of paying taxes. In other words, taxpayers in all parts of the country pay part of the electric bill of users of publicly tax-free generated power.

On the subject of tax, few people realize that bonds issued by states or municipalities, or their subdivisions, yield tax-free interest.

For all of the above reasons, we are opposed to HR 5706, introduced by Representative Buckley.

The record is filled with reasons for our opposition, but there is one significant phase of the Buckley Bill which I must refer to. It provides that the licensee (presumably the New York State Power Authority) shall have control over the rates under which energy is resold by any of its purchasers. Note how far-reaching this apparently simple provision actually is.

It circumvents the public service commission of the state of New York which would grant a rate of return necessary for the operation of a business (and unions can only get increased wages out of increased profits which come, at least in part, from increased prices).

We believe the government is in too many businesses now.

DON J. WICKHAM, president of the New York Farm Bureau, presented a resolution passed by the 56-county farm bureau, and took a firm position for private enterprise development of the hydro at Niagara.

The resolution read:

Be it resolved that in all cases where feasible we favor development of hydroelectric power by private enterprise rather than by government . . .

The private enterprise system, which made this country great, cannot be strengthened and improved by government denying private enterprise the opportunity to perform the service it is able and capable of performing with private capital.

And Mr. Wickham continued:

In connection with Niagara, the facts are clear that the project is within the ability of private enterprise to finance and operate.

Arguments are set forth that government operation and construction of the Niagara project would cost less and make current available at cheaper rates. It is our opinion that lower costs via government operation would be possible only because of tax exemption—federal, state, and local.

Such arguments are not sound in our opinion. Already we are getting in this country and in New York state too much tax-exempt property for a healthy economy.

The March of Events

Passamaquoddy Blocked

THE House Rules Committee recently blocked until next year, House action on the Passamaquoddy project.

The committee voted to postpone action on a Senate-passed bill to authorize a $3,000,000 survey of the feasibility of resurrecting the tide-harnessing power project off the coast of Maine.

The bill has been approved by the House Foreign Affairs Committee and needed only Rules Committee approval for a House vote.

Alabama

Gas Rate Increase Denied

THE Alabama Gas Corporation last month was denied a proposed rate increase of approximately $1,267,000 by the state public service commission.

The utility had asked for the rate boost to compensate for increased cost of gas purchased from Southern Natural Gas Company. Southern raised its charges, effective last April 1st.

Alabama Gas subsequently appealed the commission's decision. The notice of appeal filed with the commission was said to open the way for a review of the commission's decision by the circuit court of Montgomery.

Illinois

Utility Tax Bill Signed

GOVERNOR Stratton last month signed legislation authorizing Chicago and other Illinois municipalities to levy a 5 per cent tax on gross receipts of utilities.

Mayor Daley of Chicago said nothing would be done on imposing the tax in Chicago until work on the 1956 city budget begins in September. The city corporation counsel's office has been instructed to study the new law and investigate all its legal aspects.

Daley said the tax could gross $9,000,000 to $10,000,000 annually in Chicago, but that it would net only $4,000,000 to $5,000,000 a year because it would substitute for franchise payments. City records indicated, however, it was reported, that the tax could bring the city far more than Daley estimated.

Last year Illinois Bell Telephone Company paid a franchise tax of $6,333,887, or 3 per cent of its gross receipts in Chicago, while Commonwealth Edison Company paid a franchise tax of $7,102,507, or 4 per cent of its gross receipts.

These franchise payments would apply against any gross receipts tax. The other major utility is Peoples Gas Light & Coke Company, which pays the city no franchise tax.

City officials have said practicability of levying the tax on Western Union Telegraph Company is questionable, because so much of the company's business is in interstate commerce.

Gas Tax Exemption Bill OK'd

THE governor recently signed legislation which will result in an estimated $1,500,000 saving annually to the Chicago Transit Authority. The legislation will exempt the CTA from payment of state gasoline taxes.

Action by the governor followed settlement of negotiations between the CTA and two operating unions. Approximately 4,700 bus drivers and streetcar and L-subway employees will enjoy 4-week vacations with pay this year as a result of the new labor contract negotiated by officials of the CTA and the two major operating unions.

Those getting the longer vacation, authorized for employees of twenty-five or more years' service, represent 29 per cent of CTA's total force of 16,000.

However, despite the savings from state motor fuel tax, CTA officials refused to say whether a fare boost could be delayed longer than six months.

Kentucky

Refund Checks Mailed

THE Central Kentucky Natural Gas Company recently mailed refund checks totaling about $130,000 to retail consumers in Lexington and six other central Kentucky cities.

A spokesman for the company said customers of the Frankfort Natural Gas Company, which was taken over by Central Kentucky would not be affected.

The refunds, he said, were made in compliance with an order entered May 18th by the state public service commission.

At that time, the commission granted an annual increase of $691,000. It fixed rates which are lower than the rates which had been in effect for gas sold on and after January 10th. The company refunded the difference.

Maine

Phone Rate Boost Authorized

THE state public utilities commission recently approved, effective July 16th, an increase in rates of the New England Telephone & Telegraph Company, designed to yield $975,000 in additional annual company revenue.

The new rates include an increase from 5 to 10 cents for pay-station calls; increases of 25 to 50 cents a month for residential rates; and 25 cents to $1 for business telephones.

Spokesmen for the utility at an earlier hearing based their rate boost request on a growth of $11,000,000 in net investment; wage increases amounting to $900,-

000 a year; and action of the 1955 state legislature increasing the company's state excise tax by about $310,000 annually.

The commission said evidence at the hearing showed that the tax increase "precipitated the filing for new rates." It had no alternative, the commission said, but to consider this "a legitimate expense to be recovered by rates paid by the public."

Massachusetts

Seeks Fare Boost

THE Metropolitan Transit Authority, which serves Boston and 13 surrounding cities and towns, has petitioned the state department of public utilities for an increase in fares. The authority would boost fares paid by use of tokens to 20 cents from 18 cents—tokens are sold five for 90 cents—and increase local fares to 15 cents from 13 cents. About 60 per cent to 65 per cent of the riders now use tokens, about 18 per cent are local riders, and the balance pay a 20-cent cash fare.

Under the law the state regulatory group could order the rates into effect without public hearing. Trustees for the publicly owned transit system, appointed by the governor, estimated that with the proposed increases the system would just about break even for 1955 on operations. This is exclusive of $6,000,000 annually in fixed charges not included in computing operating expenses for fixing fares.

Utility Bills Killed

A BILL to require the state attorney general to represent the public at rate hearings of the state public utilities commission was killed last month by the state senate.

Also rejected by the same body, after having previously passed the house, was a bill to establish a consumers' counsel and an enlarged state division on the necessaries of life.

Missouri

Bill to Weaken Antistrike Law Vetoed

GOVERNOR Donnelly recently vetoed a state legislative bill which would have weakened the state's public utility antistrike law by stripping it of most of its stringent penalty provisions. Elimination of penalty provisions of the present law, as proposed by the bill, would invite interruption of public utility service and leave the state powerless to prevent it, the governor said.

"Such results," he added, "would be directly contrary to the state's obligations to its citizens. It must be avoided."

Known as the King-Thompson Act, the present law was enacted by the 1947 Missouri legislature on recommedation of Governor Donnelly during his first administration. Labor has since made repeated unsuccessful attempts to repeal or modify the statute.

In his veto message killing the latest modification attempt, the governor recalled that in a special message to the 1947 legislature he had charged that public utility strikes were "strangling the business of the state and nation" and that any law to prevent such strikes or lockouts must provide adequate penalties.

The governor declared that while the people have been protected, labor has not suffered by reason of the present law.

Earnings Not Excessive

THE state public service commission recently concluded that earnings of Union Electric Company of Missouri are not excessive, and a rate and valuation investigation of the company is not necessary at this time, it was announced by the chairman of the commission.

He said the commission had determined the net income of the company available for return from 1954 operations was reasonable, following a recent hearing held in Jefferson City at the direction of the commission. No formal order on the decision would be issued by the commission, it was said.

The commission has pending before it the operating results of several other large utilities in Missouri, to determine if rate or valuation investigations should be instituted.

New York

Governor Asked to Decide Problem

THE State Power Authority recently decided to put up to Governor Harriman the question of whether power from the St. Lawrence project should be carried to three customers over private or authority transmission lines.

One of the key questions in the continuing dispute between public and private power interests concerning the use of electric energy from the $325,000,000 hydroelectric development at Massena, New York, is how to get the power to the customers.

The authority had before it contracts to sell 100,000 kilowatts of power to the state of Vermont; 35,000 kilowatts to Plattsburg, New York, which has a municipal distribution system; and 10,000 kilowatts to the Pittsburgh Air Base, a United States government installation. Under a state law the State Power Authority must use transmission lines owned by private utilities if the lines can be obtained on reasonable terms.

The original proposal was that New York should build transmission lines to carry the power to the agency's customers. While a group of private utilities has offered to rent its lines the antiprivate utility groups have been pressing to have the authority build its own lines.

There was said to be a strong possibility, however, that if the State Power Authority moved to build lines, private utilities would go to court to stop construction.

Riders' Aid Asked

CHARLES L. PATTERSON, chairman of the New York Transit Authority, said recently that more co-operation between riders and the managers of the transit system would make it easier for the authority to achieve its goal of improved service and greater operating efficiency.

He announced that the new three-man board was undertaking a public relations program built on the idea that the best public relations was to make the subways faster, cleaner, and safer. But he appealed to the public not to expect that all the problems of the underground railroad would be licked in one month or even six months.

"Just because this happens to be more or less of a public operation is no reason people should expect a gilt-edged chariot for their 15 cents," Patterson, a former Pittsburgh railroad executive, declared.

Ohio

Governor's Veto Sustained

THE state legislature, before adjourning its 1955 session last month, sustained Governor Lausche's veto of a bill to take away the power of regional planning commissions to restrict the location of the facilities of public utilities.

The measure had been passed originally by the legislature after the state supreme court upheld a decision of the Franklin County Regional Planning Commission denying Ohio Power Company the right to stretch a power line across northeastern Franklin county.

Vermont

Continuing with Hydroelectric Project

"WE have not abandoned our plans for the development of the hydroelectric power site at East Georgia," Albert A. Cree, president of the Central Vermont Public Service Corporation, declared in a statement last month correcting an earlier erroneous report that CVPS was discarding its plans to build a 500-kilowatt hydroelectric project on the Lamoille river near East Georgia.

Cree said that, far from dropping the plans, the company expects to proceed with them, even if it gets some power from the St. Lawrence seaway project. "We have simply had to postpone carrying the plans out until our differences with the Vermont Electric Co-operative can be resolved," he explained.

Vermont Electric has filed an application with the Federal Power Commission to develop the East Georgia site. CVPS, which owns the dam site and most of the flowage rights, filed a protest with the FPC and a notice of its intention to develop the site. CVPS also has a petition before the state public service commission for permission to proceed with development of the site. Vermont Electric has filed a counterpetition with the state commission, which set July 27th for a hearing on the matter.

Virginia

New Rate Schedule Filed

A NEW electric power schedule, expected to save small commercial customers about $350,000 annually, was filed with the state corporation commission by the Virginia Electric & Power Company, to go into effect July 18th.

In filing the new optional schedule, which does not affect residential customers, the company raised the prospect of a possible future plea for higher electric rates generally.

"The company is filing this new schedule with some hesitation," wrote the company's general counsel, "in view of the fact that this filing to some extent may hasten the time when the company may find it necessary to make application before your commission for higher electric rates generally."

However, he said, it was hoped that the level of business activity in the company's service area may improve to such a degree that any further application for a rate increase may not be necessary.

Washington

Power Output Estimated in Report

THE two-dam Priest Rapids power project will be exceeded in prime power output only by Grand Coulee and Chief Joseph dams, according to a study made for Grant County Public Utility District.

Priest Rapids and Wanapum dams will produce 638,000 kilowatts of prime, or always available, power. Grand Coulee's output is 1,297,000 kilowatts, and the estimated output of Chief Joseph, 714,000 kilowatts.

The figures are contained in a report made to the PUD by Zinder & Associates, Seattle.

Manager Glenn A. Smothers of the PUD has submitted the report to the Federal Power Commission, along with the utility's application for a license to build the Priest Rapids project on the Columbia near Beverly, Washington.

In power produced at the initial installation, the PUD project will be second to Grand Coulee. Priest Rapids and Wanapum will produce 1,170,000 kilowatts. Grand Coulee produces 1,944,000 kilowatts.

Construction cost of the project will be $493 per installed kilowatt, the report said. The cost of McNary dam, a federal project, was $495 for each kilowatt.

Smothers said seven utilities and power companies had indicated willingness to buy 1,148,000 kilowatts, even at an exploratory rate which Smothers said probably was 20 per cent higher than the actual rate will be. The prospective buyers are Portland General Electric Company, the city of Tacoma, Eugene (Oregon) water and electric board, California Oregon Power Company, the city of Seattle, the city of Forest Grove, Oregon, and Puget Sound Power & Light Company.

Since Grant county will need 150,000 kilowatts, the anticipated demand is more than the dam's expected output, Smothers said.

He said the PUD would have to adopt a rationing system.

Wisconsin

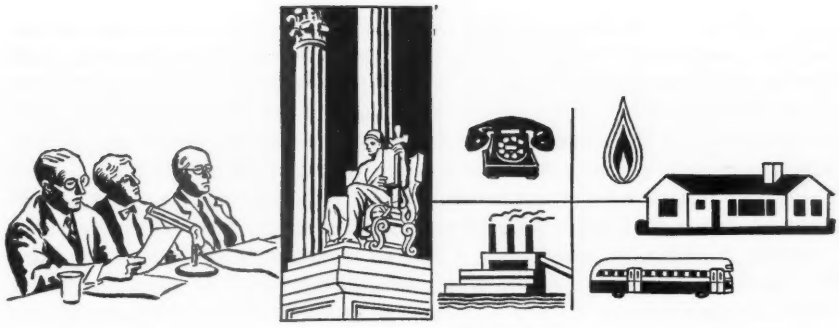
Tax Rules Clarified

THE state public service commission recently clarified its "tax equivalent" regulations for municipal utilities. The commission said it had established workable methods to answer complaints of municipal utilities having trouble setting up the tax equivalents, which correspond to ad valorem or "on value" taxes paid by privately owned utilities.

Two methods were set forth by the commission for municipal utilities to figure their property taxes. One is to take the gross book value of the property and plant and multiply by the ratio of assessed to full valuation as found by the state department of taxation and then multiply by the local school tax rates.

The other method is to apply the local school tax rate to the net book value.

A commission spokesman said some municipal utilities would pay more taxes while others would pay less. It was a technical change in the regulations. The regulation would take effect, the commission said, if no complaints were made within twenty days.



Progress of Regulation

Regulatory Trends

PUBLIC utility commissions have assumed the responsibility of constantly supervising rates of regulated companies. They not only act on complaints by customers or applications by utilities, but also initiate proceedings when it appears that the public interest will be served, having in mind the possible benefit to ratepayers and also the expense of investigation. Costly investigations stirred up by outsiders are not in the public interest. A decision by a Connecticut court, among others, states the general rule that a complainant against rates must be a customer interested in the rates (PUR1932C 337).

Rate Complaint Instigated by Professional Organization Rejected

In harmony with this idea, the Florida commission on June 30, 1955, placed its "stamp of disapproval" upon schemes whereby disinterested parties, and strangers to the subject matter involved, seek to use the process of the commission "for their own selfish gain." The commission also advised the public of their rights in seeking redress and obtaining adequate public utility service at reasonable rates.

The occasion for this expression of opinion was the dismissal of a formal complaint filed against Florida Power & Light Company on behalf of various customers by an outside organization professional engaged in so-called "analysis" of rates. National Utility Service, Inc., also known as Utility Analysis, Inc., and/or Utility Analysis Organization, had entered into contracts with customers to make an investigation and analysis of rates and if necessary to present complaints to the commission.

Champertous Contract

The contracts, said the commission, had "all the elements of champerty." The outside organization had undertaken to employ attorneys and other ex-

perts and pay all legal costs and expenses. Nothing appeared in the formal complaint or in the record showing that the professional organization had any interest either direct or remote, present or contingent, in the subject matter of the proceeding. One important feature of a "champertous contract" which stood out, according to the commission, was the agreement to pay expenses in return for 50 per cent of any rebates and savings obtained.

Another feature of a champertous contract boldly evident in the case, said the commission, and one of the features condemned by law, is that in which a person, for his own selfish gain, and a stranger to the subject matter, stirs up strife and litigation by bringing a proceeding which a party in interest might not do if left to his own judgment and not induced by the fact that the litigation would be carried on at the expense of another for what he may acquire from the action maintained.

Not Real Parties in Interest

The entire proceeding, and its historical background, said the commission, presented an unquestioned situation whereby the formal complaint was not in fact a complaint by consumers but, on the contrary, was a complaint by the outside organization, prepared, signed, and filed by its own attorneys without first obtaining supporting factual information from the nominal complainants and in many instances without their prior knowledge. The commission referred to the fact that the company furnished electric power to over 470,000 customers and the formal complaint was ostensibly filed on behalf of only 30 such customers. Sixteen of the original complainants had withdrawn and 2 of the remaining 14 were not customers of the company. Thus there remained only 12 complainants in the proceeding.

Expense of Rate Litigation

General rate investigations of large utilities, said the commission, are time consuming and tremendously expensive for all parties concerned. Ultimately, such expense must be borne by the ratepayer. Stirring up and fomenting rate dissatisfaction when the intermeddler agrees to pay all costs incurred in bringing about a rate investigation, on the promise that he will receive nothing more than a portion of any rebate or savings, was said to be a scheme of developing rate investigations which, if recognized and encouraged, would place a burden upon the commission as well as the customers.

Moreover, the "phenomenal construction programs of Florida's ever-expanding public utilities would be stifled" because the necessary capital would be difficult to obtain under such a policy. It would be economically unsound for a regulatory agency to permit or encourage "continuous rate investigations at the instigation" of such outsiders.

Secret Contract Condemned in Indiana

Years ago, a parallel situation was presented to the Indiana commission (PUR1931E 383), resulting in a vigorous condemnation of a contract between a city and Jap Jones, whereby the latter, not himself a resident of the

city, undertook to commence a proceeding against electric rates and to furnish at his own expense the services of lawyers and experts in consideration for the payment to him of a share in any amount saved to consumers. The commission, at the outset, had considerable difficulty in getting a look at the contract. Jones stayed away from the hearing but was represented by an attorney, who said that the reason for not appearing was that such a contract was a matter beyond the jurisdiction of the commission. After prolonged arguments and attempts by the commission to obtain information, the city attorney finally agreed to produce the contract.

The contract on its face, said the commission, had "all the elements of champerty." There was no showing that Jap Jones had any interest direct or remote, present or contingent, or even as a taxpayer in the rate controversy. A feature of a champertous contract such as this, said the commission, was that a stranger to the subject matter, for his own selfish gain, stirs up strife and litigation. The commission said that without hesitancy it condemned the entire transaction as being a fraud upon the public, the consumers of electric current, and taxpayers.

The Indiana commission, like the Florida commission, pointed out that its own organization was investigating rates but the commission was confronted with a situation whereby a public official and "an intermeddler" were the authors of a champertous contract, which was against public policy. Any amount representing the consideration named in the contract would of necessity have to be paid by the public.

It was said to be a recognized fact that so-called racketeering had supplanted and crowded out legitimate business in the country and was fast entering into the field of governmental activities. The transaction in question was termed conclusive evidence of the fact that so-called racketeering had been introduced into the field of utility regulation, to the great detriment of the public. Consumers had the right to obtain service under rates fixed by the commission in conformity with the law without obligating themselves to divide that which was theirs among those who were introducing a system of "racketeering for their own selfish gain."

No Ruling on Champertous Contract

The Wisconsin commission, however, did not rule on a contention that a rate proceeding had been brought by the complainant under a champertous contract. In that case (5 PUR NS 37, 50), the one who started the proceeding was to receive $25 for expenses and one-half the amount saved on the first year's pumping contract "if and when there is a reduction secured on rates for the village."

The commission said that although champertous contracts are against public policy, the commission did not believe it necessary at the time to rule on the matter. Instead it had followed its invariable practice of investigating complaints on their merits. The commission pointed out, however, that the services recited in the contract were ordinarily performed by the commission where necessary in the course of its investigation.

Review of Current Cases

Natural Gas Rate Zones and Differentials Replace Uniform System-wide Rates

THE Federal Power Commission found that the use of uniform rates by Northern Natural Gas Company for its entire system was unduly discriminatory and preferential. This practice, the commission said, resulted in shifting transmission cost from those whose service requires its incurrence by reason of the greater transportation distances to others who are not responsible for such cost, and who are not benefited accordingly.

Distance Factor

The pipeline system is about 800 miles long, extending from the Panhandle field in Texas and the Hugoton field in Kansas and Oklahoma to St. Paul and Minneapolis, Minnesota. The commission decided that customers near the gas field should not be made to pay the same rates as those farther along the pipeline system.

The delivery cost of natural gas increases in close proportion to the length of the transmission line. Those opposed to zoning claimed, however, that the distance factor was offset by the fact that sales in Minnesota benefited customers to the south in that they enjoy a lower unit transmission cost than they would otherwise have. The commission agreed, but pointed out that jurisdictional sales in the other states served by the company would make an equal or greater contribution to the lowered cost of transmission and to Minnesota customers.

There was no such concentration of sales in a single area of the system as would countervail against the arguments that the distance of transmission is the primary and controlling factor in this case. The commission took particular note of the fact that the annual load factor of estimated sales in Minnesota was lower than the system average and also the lowest of any state served by the company. Thus, while the large volume sales in Minnesota contributed to a lesser unit cost for transmission, the lower load factor of such sales had a converse tendency. The commission also observed that its position in this case was in general accord with the position taken by the Interstate Commerce Commission in similar matters which have so often been approved in the courts.

Rate Zones and Differentials

Establishment of three service zones with rate differentials was considered the most equitable solution to the problem. The theory of cost allocation advocated by the commission staff was adopted with certain modifications. The staff, in distributing the total cost of service to the several zones, first determined the average weighted transmission miles required to haul purchased and produced gas from the various sources to a common point on the system.

The number of transmission miles from the source of supply to each sales delivery point was then determined. Transmission demand miles were computed by multiplying the mileage thus obtained for each delivery point by the 3-day system peak average sales at each such point. Transmission commodity miles were computed by multiplying the mileage to each delivery point by the annual sales made at that point. The data thus obtained were then grouped by zones and classes of service.

Under the staff's procedure, the unit cost of service on a system-wide basis was

then determined for each function and allocated to zones and classes of service. The commission did not believe it either sound or reasonable to allocate costs in part on a system-wide basis and in part on the basis of a segregation of certain properties as the proponents had done.

Noting that it was attempting to arrive at a sound and equitable basis for establishing for the first time a differential in rates in separated areas of a system which had not heretofore had zone rates, it found the cost allocation procedure advocated by the staff to be particularly appropriate. The maximum differential in rates to be made effective on an interim basis, subject to subsequent adjustment and possible refund, was found to be about two cents per thousand cubic feet. This differential was the difference in average cost per thousand cubic feet purchased at a load factor of 70 per cent.

Dissenting Opinion

In a dissenting opinion, Commissioners Draper and Smith found that the differential in average costs between Zones 2 and 3 was 3.06 cents per thousand cubic feet. For this reason they could see no reason for the reduction of the amount from 3 to 2 cents. They said it would be more equitable to establish an initial differential of 2½ cents. These commissioners did concur, however, in the conclusion that the uniform system-wide rate structure resulted in some discrimination. They also agreed that rate zones should be established. *Re Northern Nat. Gas Co. Docket No. G-2217, Opinion No. 281, May 19, 1955.*

Reproduction Cost Weighted against Original Cost and Equity Capital Costs Determined

THE Indiana commission authorized a telephone company to increase its rates so as to produce a return of not less than 6.1 per cent, which was considered fair. Coin-box rates were increased from 5 to 10 cents, the commission feeling that the increase would not overburden the users, and would produce a substantial part of the additional revenues authorized.

Indiana is a fair value state. The commission reiterated its belief that some consideration should be given to reproduction cost at current price levels. When giving consideration to reproduction cost, the commission pointed out, it must be weighed against original cost. The weight allowed would depend upon the disparity between original book cost and current price levels or reproduction cost at current price levels at the time the plant additions were made.

The reproduction cost at current price levels will be somewhat near, or the same as, the original book cost when a large portion of plant has been constructed at comparatively high or inflated prices, the commission noted. In this instance, it was concluded that little weight should be given to the reproduction cost estimates since a wide disparity between original cost and reproduction cost existed only in connection with the older part of the plant which had been constructed and placed in service prior to the end of World War II. The major portion of the present plant was constructed in high inflationary years.

Spot-price Yield Ratios Not Sole Factor

Two qualified experts had presented evidence on the cost of capital. Since there was no public market for the company's stock (the company was a subsidiary

whose parent owned all its stock), the first witness established his figures by comparing average earnings-price ratios, earnings-net proceeds ratios, and dividend yields with those of other companies. The second witness disagreed on the method of arriving at cost of equity. He arrived at his figures by using adjusted spot-price yield ratios exclusively.

The commission first summarily rejected, in this case, any imputation of the parent company's capital cost to derive the subsidiary's fair return. It was also pointed out that historical pay-out ratios of a subsidiary whose stock is wholly owned by the parent are more convincing evidence than a ratio derived from the median of pay-out ratios of similar utilities. The commission did not wholly accept the theory that earnings per share are not a factor determining cost of common money. Mitigation of the importance of such a basis, the commission believed, was proper, but not to the extent recommended by the second witness. Confidence in a security in a free market, the commission commented, is a subtle intangible built over a period of time by a stable dividend record more than by spectacular earnings records. Stability of earnings and conservative pay-out ratios are prerequisites of an ample, yet uninterrupted, dividend record.

The commission also noted that the second witness' yield method, if used exclusively, would tend to penalize low pay-out companies. The commission was committed to encouraging retention of earnings from a stability of capital standpoint, and from a reinvestment of earnings standpoint, and, therefore, could not categorically find low return because of low dividend payment records. *Re General Teleph. Co. No. 25686, May 26, 1955.*

State Control over Interstate Pipeline Route

THE New York commission does not consider that it is within the authority of a state commission to review, reconsider, or alter the route of a proposed interstate pipeline where a pipeline company has obtained a certificate from the Federal Power Commission authorizing construction. The state may, however, establish standards which require minor deviations in the approved route in cases where they are required in the interest of public safety.

But in a recent decision involving the Tennessee Gas Transmission Company, the commission refused to allow construction of a high-pressure line within 100 feet of existing buildings (such construction being forbidden by Rule 3 of the commission's Gas Transmission Code) unless the company unqualifiedly committed itself in writing to comply with ten specific additional precautions listed by the commission. The commission indicated that Rule 3 should also apply to a large public playground even though no structures were constructed thereon. *Re Tennessee Gas Transmission Co. Case 15686, May 25, 1955.*

Distance Bars Electric Service Extension

THE supreme court of Alabama affirmed a lower court's dismissal of a petition for mandamus to compel an electric co-operative to extend its service wires a distance of 1½ miles to the petitioner's home. It was held that the co-

operative was not bound to extend its lines so great a distance merely to serve one or two customers who were not shown to be otherwise entitled to service.

Necessary Averments

The court noted that such a petition should aver that the utility is a cooperative, and show the qualifications and requirements pertaining to membership. Moreover, it must be shown that the petitioner has a clear right to demand service, that he is entitled to it, and that he has no other remedy. The petition in this case was wanting in each of these particulars.

Demand for Extension Must Be Reasonable

It was pointed out that the right of inhabitants to demand an extension of service is not absolute, but must be determined by the reasonableness of the demand under all the circumstances. This depends upon the need and cost of the extension, the financial condition of the utility, the advantages that will accrue to the public from such an extension, and the scope of the franchise or charter obligation.

Although an unreasonable demand for service will not be sustained, yet neither will the utility be allowed to restrict extensions only to such points as will afford immediate profit; there is an intermediate point, said the court, beyond which the utility may require the consumer to assist with the necessary expense involved in providing service. *Jordan v. Clarke-Washington Electric Membership Corp. 80 So2d 527.*

Telephone Subscribers Denied Right to Transfer to Adjacent Company's Exchange Area

THE petition of subscribers of one telephone company for the right to receive telephone service from an adjacent exchange area of another telephone company was denied by the Missouri commission despite the fact that their shopping center was in the latter area. The commission did not believe that the boundaries of their existing exchange were improperly or unreasonably located, or that the people were being discriminated against by the fact that they were unable to obtain service from the adjacent exchange area.

Service Complaint

Generally speaking, the physical characteristics of the existing service were good and the lines were fully metalized. The principal objection involved the time in which it took the exchange operator to answer the telephone. This was ascribed to the fact that only one operator was employed at that exchange. The company indicated that it would take steps to remove this cause of complaint.

Filed Exchange Maps

The service area maps defining the boundaries of the exchanges were filed with the commission and by operation of law became effective. As such they were binding on the commission, the company, and subscribers, unless found to be arbitrary and unreasonable.

The commission pointed out that boundary lines of telephone service areas must be fixed at definite locations and that it is inevitable that certain persons will be served by a particular exchange and their neighbors by another. It said that this alone, however, does not result in

undue preference for, or discrimination against, any person. After such boundaries have been approved, they should not be disturbed unless it is clearly shown that they are arbitrary and unreasonable. Furthermore, the commission said, unless exceptional circumstances are shown, one company should not be permitted or required to invade the service territory of another. *Searcy et al. v. Southwestern Bell Teleph. Co. et al. Case No. 12,961, May 11, 1955.*

Natural Gas Price Adjustment Clause Approved

THE Massachusetts commission, after an investigation on its own motion, permitted the establishment of automatic escalator clauses in connection with rates of natural gas distributors. Although the commission had, in other decisions, approved the use of fuel clauses in manufactured gas schedules, and permitted similar clauses in connection with electric rates, escalator clauses based on other cost components had not previously been approved.

The clauses under investigation in the instant case seemed to resemble the fuel clauses to a marked degree. The principal reason for approval of fuel clauses in previous cases, said the commission, was the realization that fuel prices were relatively volatile and that fuel costs constituted a large portion of the total cost of manufactured gas.

Under conditions involving natural gas, although the established prices were by no means as volatile as those of raw fuels such as oil and coal, the proportion of gross revenues expended for the purchase of natural gas was substantially greater than the fuel costs on earnings statements of manufactured gas companies. In Massachusetts, the cost of purchased gas, on the average, about equaled net operating revenues. Consequently, a relatively slight increase in the cost per Mcf of purchased gas would, even after taxes, materially affect the companies' net earnings.

The commission noted the large number of rate cases which follow a substantial increase in wholesale prices. The alternatives would be either to permit the increases to go into effect without investigation or else a long and protracted series of rate hearings occupying considerable time and involving substantial expense to both the companies and the state. Moreover, orders stemming from such hearings would, unless issued at one time, result in prejudice to one company as against another.

The commission did not think that either good regulation or common sense required these results. The gas adjustment clauses were more practical so long as the proposed increase was confined to the increased cost of wholesale gas and so long as it was obvious from the current earnings statements of the companies that they could not be expected to absorb the increased costs out of present revenues.

The application of the clause in the event of a decrease in wholesale rates was made mandatory, although it was left to the individual companies to determine whether the clause should be applied in the event of an increase.

Suspension Policy

The question as to whether the commission should retain jurisdiction to suspend the operation of the clause was discussed. Concluding that it should, the order provided that the clause was to contain a statement giving the commission power to suspend.

The commission thought it appropriate to set forth its policy with regard to

suspension. The power of suspension would not be invoked, said the commission, unless figures filed as part of the notice of increase indicated net earnings larger than would be normally appropriate for gas distributing companies.

The commission believed it would be unfair both to the companies and to the public to state categorically at what point in earnings the suspension power would be invoked, since what might be appropriate for one company might be too large or too small for another. In general, the commission would allow the adjustment clause to become effective provided the result was not an unreasonable rate of return. *Re Worcester Gas Light Co. DPU 11209, 11210, 11221, May 27, 1955.*

Return and Revenue Allocations Determined In Rate Case

THE Connecticut commission decided, in a proceeding by a water company for a rate increase, that a return of 5.6 per cent on a rate base fixed at one and one-half million dollars was no more or less than reasonable. The company operated a gravity supply system, had a debt ratio of 38 per cent, and showed no unusual risk characteristics or need for major plant expansion.

Return Measured by Cost of Money

Since the rate base closely approximated the invested capital, the commission considered particularly appropriate a return measured by the cost of money. With a return of 5.6 per cent the company could expect to service its debt at 4 per cent and earn 6.65 per cent on the equity capital. This rate of return was further expected to maintain the market price of new shares at book value, thus exposing the old stockholders to no risk of dilution of their equity.

Allocation of Revenue Requirement

In resolving the problem of allocating a just proportion of the company's total revenue requirement to a class of industrial customers, the commission applied some fundamental economic considerations relative to elasticity of demand. It was pointed out that the company may be obliged to allocate only a reasonable proportion of fixed costs, besides variable costs, to a class of customers whose demand curve is very elastic; and rates based on that allocation would not be held preferential or discriminatory, though they may not recover their full proportionate share of fixed costs.

The company proposed that public fire protection should be charged with rates based on an incremental cost study showing that 28 per cent of plant and expenses were devoted to that use. This proposal was rejected and, instead, about 19 per cent of required revenue was allocated to public fire protection.

Separate Money Claims Not Considered

In determining how much of the required revenue should be recovered from a large industrial customer, it was insisted by that user that a separate obligation claimed against the water company should be satisfied by means of favorable water rates applied to the claimant. The commission declined to entertain the claim, in view of recognized principles governing relations between utilities and their customers designed to protect against undue preference. *Re Torrington Water Co. Docket No. 9117, June 21, 1955.*

Federal Contributions Excluded from Plant Values

WHETHER the Wisconsin commission had acted properly in eliminating contributions in aid of construction in a determination of the value of a town's water utility was the question that presented itself to the state supreme court after it had acknowledged jurisdiction to review such determination. A portion of the town's water utility had been annexed to a city.

Upon review, the city attacked the method employed by the commission in one particular. In 1937 the municipality had received a federal grant to aid in the construction of a waterworks system, community building, and bridge. Some of the funds received had been used in the construction of the water utility. The federal grants-in-aid had been analyzed by the commission and a portion had been allocated to the water utility and excluded from the valuation.

The commission's practice of deducting contributions in aid of construction seemed both logical and inevitable. If the commission had not deducted such contributions, the town would have been required to pay to the city its pro rata share of the contributions, none of which represented any investment by the water utility.

The additional payment, the court commented, would have required the town to borrow funds or to obtain an increase in rates.

Probably both results would have followed. Although the conditions upon which the federal grants had been made were not included in the record, the court thought it clear that they were for the purpose of financing the construction of a waterworks system.

The grants enabled the giving of water service to the people in the area at low rates. The commission had followed the consistent practice of excluding contributions in cases of rate making, financing, and sales of utilities. Exclusion of the contributions was held to be proper. *City of St. Francis v. Wisconsin Pub. Service Commission, 70 NW2d 221.*

Injunction Denied While Issues Are Pending before Federal Power Commission

SEVERAL gas producers moved for a temporary injunction against the Federal Power Commission's Order No. 174-B. This order, resulting from the historic Phillips Petroleum decision (347 US 672, 3 PUR3d 129), involves compliance by gas producers and gatherers with certificate and rate requirements.

The producers contended that the sale of raw natural gas at the wellhead, and the sale of gas under a contract requiring that raw gas be processed and dried gas delivered, was not within the purview of the Phillips Case. Commenting that such sales had the general appearance of being in the flow of interstate commerce, the court confined itself to passing upon the motion for a temporary injunction.

The contention that the court was ousted of jurisdiction because the points raised were being debated in an administrative proceeding, and that the federal court would not give advisory opinions, was not sustained. The court held that a justiciable issue was presented in that a serious contention had been made that a company was violating both state and federal regulations in addition to being confronted by a penalty of a heavy daily charge. There was a possibility that administrative au-

thorities might so delay the determination of the issue as to practically deprive the companies of remedies in federal courts.

Having established that a federal court had jurisdiction to enjoin the improper, capricious, and arbitrary action of an administrative body where irreparable injury has been shown, the court denied the motion for a temporay injunction. The very issues involved in the motion were pending before the Federal Power Commission, which proceeding had not been finally adjudicated. In a broad sense, therefore, the administrative remedies of the producers had not been exhausted. Also, no irreparable damage had been shown. *Gulf Oil Corp. v. Federal Power Commission et al. 128 F Supp 446.*

Widening of Underpass Not Required

THE New Jersey commission denied an application of a municipality to require a railroad to enlarge and reconstruct an underpass claimed to be narrow and dangerous to traffic, where it was shown that the capacity of the underpass was equal to that of the street on one side of the structure.

Further reasons for the commission's decision were that no encroachment by the underpass upon the street was shown, nor was evidence presented to prove any undue hazard to traffic by reason of the structure's position or design. The question of structural capacity to withstand the weight of trains passing overhead was not raised.

The commission declined to assume jurisdiction over a county, sought in this case to be brought in as party defendant, since its regulatory powers extend only to public utility corporations. *Manville v. The Reading Co. Docket No. 7015, June 1, 1955.*

Majority Vote Not Enough to Justify Extended Area Service

THE petition of a citizens' telephone unification committee for the establishment of extended area service was dismissed by the North Carolina commission. The proposal would have affected three towns served by a small company.

Ballot of Subscribers

At an earlier hearing the commission had directed the company to make a current survey of subscribers in the area "to the end that said survey would conclusively disclose the interest of all the subscribers for extended area service at the rates and charges which the company alleges are necessary to the furnishing of said class of service." The company mailed 1,153 ballots and received 1,029 returns. Of these 591 voted for and 438 against extended area service at higher rates. Relating the number of ballots in favor to the number of ballots mailed, the commission found that 51.25 per cent favored the unification program.

A vote of slightly over 50 per cent of the subscribers was not considered sufficient justification for a change in the rates and for the establishment of extended area service.

The state commission remarked that no absolute rule can be established as to circumstances justifying extended area

service. Each case must be considered in the light of the advantage and expense which would be experienced by all subscribers. *Re Warren County Telephone Unification Committee, Docket No. P-7, Sub 50, June 17, 1955.*

Competitor May Protest Relocation of Television Station

THE United States court of appeals sent a proceeding back to the Federal Communications Commission for rehearing on an application for modification of a construction permit. The commission had permitted the modification, which changed the site of a television transmitter, notwithstanding a competing station's claim that the change would permit network affiliation and adversely affect the competitor's business.

The court ruled that the commission erred in holding that the competitor was not a party in interest. Evidence was relied on that the competitor's advertising revenue would be substantially reduced because of the rise in popularity of the applicant's station when it obtained network affiliation.

The court of appeals concluded that the competitor was entitled to be heard and directed a rehearing for that purpose. *Greenville Television Co. v. Federal Communications Commission, 221 F2d 870.*

Anticipated Income Considered in Authorizing Securities

THE New York commission authorized Rockland Light & Power Company to issue sinking-fund debentures and cumulative preferred stock, and to purchase common stock of its wholly owned subsidiary. Proceeds from the sale of the new securities were to be used for reimbursement of the company's treasury for capital expenditures, for the acquisition of its subsidiary's common capital stock, and for property additions. Funds paid for the subsidiary's stock were to be used to discharge an indebtedness due the holding company, which was, in turn, to utilize the proceeds to discharge short-term unsecured notes.

Guiding Standards

An important standard adhered to by the commission, in authorizing the issuance and sale of securities, particularly with respect to debt and junior obligations, is that the anticipated income of an issuing company shall be sufficient to service new securities after marketing. In fact, the commission said, this standard is equally as important as two other standards; namely, that a reasonable relationship shall exist between the different classes of outstanding securities in a company's capital structure and that the company shall have property of real value to justify such structure. Even though a utility's financial status may conform with the latter two requirements, its ability to earn is the fundamental factor which controls its credit and dictates the type and amount of securities it may issue.

Private Placement of Securities

The commission concluded that the company properly decided to dispose of the new securities by private placement with institutional investors. It observed that if the company had been required to offer the new securities under competitive

bidding conditions, it would have had to invite bids on each class of securities. Certain underwriters are not interested in equity securities. In the second place, it was problematical whether the terms obtainable under competitive bidding arrangements would be better than those negotiated with the institutional investors, especially after giving consideration to the additional costs required by a public distribution.

Furthermore, the company could not sell sinking-fund debentures on a deferred delivery basis under either a negotiated underwriting or competitive bidding procedure. Finally, the commission pointed out that if one or all bids were unsatisfactory and had to be rejected, the company's credit standing could have been further impaired and its opportunity to dispose of the securities at a price better than specified in the rejected bids probably would have been diminished. *Re Rockland Light & P. Co. Case 16842, May 16, 1955.*

Rate of Return Low but Stock Earnings Adequate

THE Ohio commission agreed that a water company which was earning a return of only 1.24 per cent was entitled to a rate increase. A 60 per cent increase in rates suggested by the company was considered excessive. These rates would have provided the company with a 4.88 per cent return on a reproduction-cost-new-less-depreciation rate base. This was equivalent to twice the earnings available for interest and dividends.

Cost of Rate Case

The cost of the rate proceeding, including preparation and presentation of all pertinent evidence, was $5,000. The company's request to charge this sum to operating expenses was granted on the condition that it be amortized over a 2-year period.

Extent of Rate Increase

The rates authorized would provide the company with a return of 3.25 per cent. The parent company which held all of applicant's stock would receive a 7.88 per cent return on its investment instead of the 12 per cent return which it would have earned if the rates proposed by the company had been approved. *Re Lawrence County Water Co. No. 25,038, June 10, 1955.*

Telephone Exchange Discontinuance Approved but Resulting Mileage Charges Disallowed

THE Pennsylvania commission sustained a complaint by subscribers against the discontinuance of their telephone exchange. The company, in abandoning the exchange, had increased the rates for all classes of graded service (except multiparty). The contention was made that the rates should be the same as if the exchange were still operating.

Hardship to Customers

The commission agreed with the customers. With the elimination of the exchange in question and the inclusion of the subscribers in the territory of another exchange, many of them were somewhat distant from the base rate area of their new exchange. Some were then required to pay mileage charges applicable to the

higher grades of service to which they were accustomed. This, the commission held, worked a hardship. While the decision to eliminate the exchange was within the limits of the company's managerial discretion, the change in rates would have to be accurately explained to, and subsequently approved by, the Pennsylvania commission.

Burden of Proof

The complaint was not filed prior to the effective date of the tariff supplement which eliminated the exchange. Under these circumstances the burden of proof is on the subscribers. The commission considered the burden as having been successfully borne by proof that the exchange had existed for fifty years, that the customers were accustomed to graded service, and that the nature of their calls required graded service.

Island Base Rate Area

The net effect of the decision was to permit the discontinuance of the exchange, but to maintain the monthly charges at rates consistent with those of other residents of the new exchange area with mileage charges eliminated. This could be done by the establishment of an "island base rate area" within the exchange into which the customers of the discontinued exchange were placed. *Whitlock v. Commonwealth Teleph. Co. Complaint Docket No. 16039, June 6, 1955.*

Expansion of Carrier's Authority "in the Public Interest"

THE Maine commission granted the authority requested by a transportation company to carry passenger baggage and certain items demanding expeditious transportation. However, permission to handle other articles of a less urgent nature was denied, though there was no doubt that the company's proposed service would be faster than existing facilities could provide.

"In the Public Interest" Applied

The commission's decision was founded upon its view of the public interest. Transportation of the baggage was shown to be requisite to the company's existing authority granted in the public interest, and the handling of the other urgent items appeared to be inadequately performed by existing carriers.

But with respect to the less urgent articles, the commission decided, in effect, that the benefit accruing to the public from the faster transportation of such articles by the petitioner would not be commensurate with the disadvantage that the public would sustain by reason of adverse effect of the new service upon carriers.

"In the Public Interest" Construed

In developing its opinion the commission construed the phrase "in the public interest." It declared that the phrase is not merely a general reference to public welfare, but relates directly to the adequacy of transportation service, to economy and efficiency, and to appropriate provision of transportation facilities. The belief was expressed that the words are synonymous with "public convenience and necessity," or include the latter phrase.

Grant Limited to Authority Requested

As the authority requested by the company was limited, apparently for the purpose of avoiding any appearance of seeking to compete with motor freight carriers, the commission was prompted to ob-

serve that, while it could grant only that portion of the authority sought which was justified by evidence, yet it could confer no authority beyond that requested. Consequently, the order reflected certain pertinent limitations so imposed by the petitioner. *Re Maine Central Transp. Co. J. No. 1, June 21, 1955.*

Carriage of Fellow Workers Unregulated

THE supreme court of Kentucky in reversing the lower court held that an owner of an automobile who regularly carried several fellow employees with him to and from his place of employment and charged a specific sum for the service was not a contract carrier by motor vehicle within the meaning of the state motor carrier laws.

It was observed that such transportation service was merely incidental to the main business or purpose of the owner of the automobile.

"Commerce" Defined and Applied

The case was decided on the meaning of the term "commerce" as used in the state motor carrier laws. "Commerce," the court pointed out, connotes the exchange of merchandise on a large scale between different places or communities and suggests that the transaction must be more than incidental to a person's real purpose. The court declared that a person would not become subject to the laws regulating motor carriers merely because he accepts money for carrying other persons in his automobile, where the money is in effect a share of the expense of a trip taken for their mutual advantage. Particularly is this true when the trip, as in this case, is incidental to another purpose.

Court Unsympathetic to "Free Loaders"

As a final persuasive point in the opinion, it was said that if for every trip where expenses were shared, the owner of the vehicle should be held subject to the motor carrier law, then the host would be compelled to shoulder the whole burden. But the world already has enough "free loaders," said the court, without the judicial creation of a new compulsory class. *Chauncey v. Kinnaird, 279 SW2d 27.*

Loss of Competitive Position Justifies Hearing on Protest against Radio Frequency Change

THE United States court of appeals reversed a Federal Communications Commission order permitting a radio station to change its frequency and power. The court found error in the commission's dismissal of a competitor's protest without a hearing.

The protest alleged that the proposed change would cause substantial interference with protestant's clear channel station for a substantial area and that the resultant loss of listeners would impair the station's competitive position and result in economic injury.

The court of appeals said that these contentions were of sufficient merit to justify a hearing.

Party in Interest

The court commented briefly on the fact that the competitor had filed its appeal under both §402(a) and §402(b) of the

Communications Act and noted that no appeal was possible under the first section since an order denying a protest is reviewable only under §402(b). While discussing the applicable statutes, the court quoted the definition of "party in interest" stated in §309(c), which is concerned with the persons who may file a protest. "A party in interest is one who is aggrieved or whose interests are adversely affected." The protestant, the court said, was within the scope of this definition. *Metropolitan Television Co. v. United States et al. 221 F2d 879.*

Other Recent Rulings

Air-line Bankruptcy Sale. The United States district court held that the sale of assets of two bankrupt airlines to another airline by a bankruptcy trustee was valid, notwithstanding the failure of the trustee to obtain approval of the sale from the Civil Aeronautics Board. *Re Airlines Transport Carriers, 129 F Supp 679.*

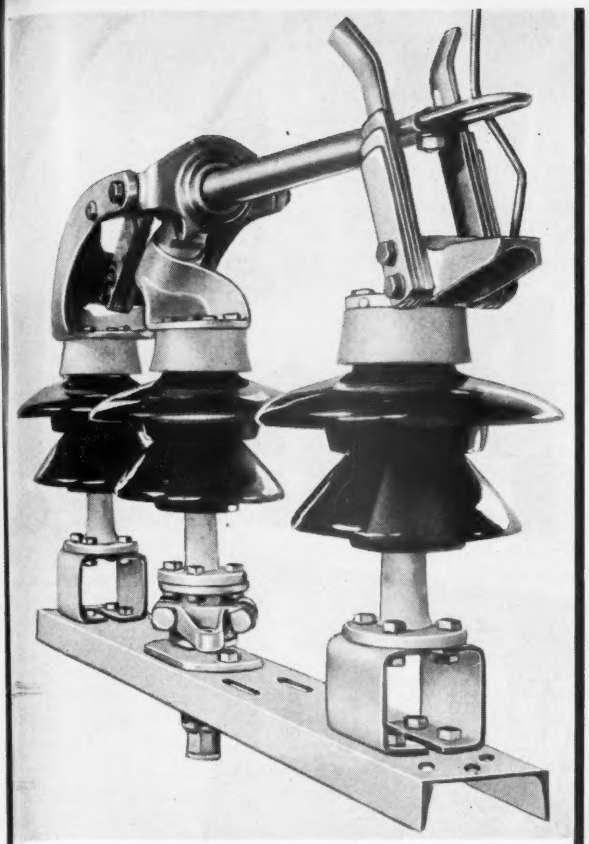
Plumbing Ordinance Not Discriminatory. A New Jersey court held that a municipal plumbing ordinance which exempted public utilities from its requirements was not discriminatory in favor of the utilities since the classification was a reasonable one in that the utilities were subject to regulation by the regulatory commission. *Trenton v. Davidson, 113 A2d 538.*

Freight Forwarder. A freight forwarder, according to the United States court of appeals, is in the position of a common carrier agency in relation to the public which entrusts it with a shipment of goods, although not considered a common carrier for every purpose. *National Carloading Corp. v. United States, 221 F2d 81.*

Depreciation Rates. The Wisconsin commission held that a depreciation rate based on an estimated service life of thirty-five years with no salvage value was reasonable and proper for underground circuits of an electric company. *Re Mississippi Valley Pub. Service Co. 2-U-4188.*

Rates Reduced on Petition for Increase. The Colorado commission refused to authorize a rate increase for a common motor carrier of milk and, on the contrary, ordered a reduction in certain rates, where the return on the company's rate base was shown to be 19 per cent, its minimum operating ratio was 82 per cent, the net earnings on its common equity were 15.5 per cent, and other factors tending to increase profits in the future were shown. *Re Colorado Milk Transport, Inc. Case No. 5095, Decision No. 44256, May 23, 1955.*

Safety at Crossing. The Ohio supreme court held that a commission order requiring a railroad to install automatic flashing lights and short-arm gates at a crossing was not unlawful or unreasonable where the view was impaired by the presence of a grain elevator and other buildings, and a school bus crossed daily during the school season. *New York C. R. Co. v. Ohio Pub. Utilities Commission, 126 NE2d 320.*



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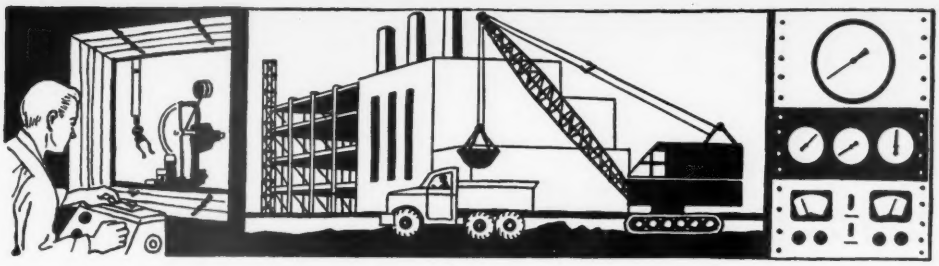

Industrial Progress

Public Service Elec. & Gas to Install Two New Boiler Feed Pumps

TWO new boiler feed pump installations serving two 225 Megawatt units will be supplied Public Service Electric and Gas Company's Linden, New Jersey plant. According to the announcement, this will be the first commercial installation in a major utility of a complete set of boiler feed pumps to operate at rotative speeds in the range of 8300 RPM.

All major pumping equipment for the two new generating units will be supplied by Worthington Corporation and will include seven boiler feed pumps each operating at 8300 RPM, seven step-up gears driven by 4500 HP motors and operating from 1780 to 8300 RPM, four 5-stage vertical condensate and booster pumps, four single-stage boiler feed booster pumps, three 2-stage vertical booster pumps, and three 3-stage vertical condensate pumps. Duplicate boiler feed pumps and drivers are applied on two widely different feed systems.

Gas Industry Construction Expenditures at High Level

THE gas utility and pipeline industry spent $1,055 million during 1954 on construction of new facilities, the American Gas Association reports. It is expected that in 1955 the industry's total construction expenditures will aggregate $1,385 million. This would make expenditures for new construction and plant expansion in the current year, the second highest in the history of the gas industry, surpassed only by the total of $1,462 million spent in 1951 for construction.

During the four years, 1955-1958, the gas industry expects new construction costs will equal about $4,315 million, somewhat under the record $4,933 million spent on this work in the 1951-1954 historical period. The forecast includes totals of $1,205 million for construction in 1956; $974 million for new facilities in 1957; and $751 million to be spent in 1958. It is pointed out by the AGA Bureau of Statistics that these estimates are most conservative since companies tend to under-estimate construction expenditures, particularly for the more remote future years. Actual expenditures for 1957 and 1958 could be well above these estimates.

Ninety per cent of total construction expenditures for 1954 were devoted to natural gas facilities, while the corresponding percentage for 1955 is expected to be 93 per cent. For the four year period, 1955-1958, it is estimated that 94 per cent of construction expenditures will go toward new natural gas construction. Expenditures for construction for other types of gas totaled $109 million in 1954 and will drop to about $101 million this year. The four year estimate for construction of manufactured and mixed gas facilities is about $282 million, compared with $396 million spent on such construction work in the 1951-1954 period.

B & W to Build Largest Boiler For Con. Ed. of N. Y.

THE Consolidated Edison Company of New York announced recently that it had signed a contract with The Babcock & Wilcox Company under which B&W will design and build the largest boiler in the world to produce steam for the utility's Astoria, Queens station. The unit will have a capacity of 2,400,000 pounds of steam per hour and will consume over 50 carloads of coal a day or enough to heat about 2,000 average homes for a full year, the announcement said.

Erection of the huge boiler, which will produce sufficient steam to generate between 300,000 and 375,000 kilowatts of electricity, will start in early 1957 and it is scheduled to begin operating in the fall of 1958. It will have a design pressure of 2500 pounds per square inch. An outstanding feature of the design, according to Babcock & Wilcox, is that the boiler will be equipped to burn either coal, oil or natural gas or a combination of these fuels.

G-E Bulletin Describes 5-Cycle Distribution Breaker

"NEW 5-Cycle Distribution Breaker" is title of new bulletin offered by General Electric Company. Breaker is described as the fastest power circuit breaker available for distribution applications. Bulletin contains drawings, detailed description, complete information on ratings, dimensions, sizes, weights, and other data concerning the breaker and accessories. Requests for the 8-page publication, designated GEA-6295, should be addressed to General Electric Company, Schenectady 5, New York.

PG&E Asks Permit for $24 Million Gas Line Project

PLANS for a $24,000,000 enlargement of facilities to import more natural gas for customers of Pacific Gas and Electric Company were disclosed in San Francisco recently when the Company filed an application with the California Public Utilities Commission for authorization to begin the project.

Termed necessary to meet increasing needs of customers, the project would ultimately result in bringing an additional 225 million cubic feet of natural gas a day into Northern and Central California from Texas and New Mexico fields. This would increase the PG&E's daily importation to 925 million cubic feet by January 1, 1959.

(*Continued on page* 28)

A-C Announces New Line of Low-voltage, Metal-enclosed Switchgear

A NEW line of low-voltage, metal-enclosed switchgear available in indoor and outdoor arrangements has been announced by Allis-Chalmers Manufacturing Company. The switchgear features new circuit breakers rated 600 amperes, 25,000 aic at 600 volts (LA-25), and 1600 amperes, 50,000 aic at 600 volts (LA-50).

The new switchgear is described in bulletin 18B8283, entitled "Allis-Chalmers Low Voltage Switchgear," copies of which are available upon request from Allis-Chalmers Manufacturing Company, 965 S. 70th street, Milwaukee, Wisconsin.

I-H Booklet Covers Heavy-duty Power Unit

AN eight-page booklet describing the UD-1091 power unit was published recently by International Harvester Company's industrial power division.

The UD-1091 is the largest diesel model in International's line of 18 heavy-duty power units. The six-cylinder, valve-in-head engine develops 190 horsepower at 1,400 rpm. The unit is designed for use both as stationary power and for installation in powered machines such as shovels, air compressors, rock crushers, and generators.

The new booklet contains full specifications, photographs, and performance charts on the UD-1091 as well as descriptions of available attachments. To obtain a free copy, write to Consumer Relations Department, International Harvester Co., 180 N. Michigan avenue, Chicago 1, Ill.

G-E Develops New Automatic Dispatching Systems

A NEW automatic dispatching system for performing routine and repetitive functions for electric utility production departments has been announced by the General Electric Company's Instrument Department.

The system of equipment is composed of four basic building blocks in the form of console sections. They include: a master area console, dispatching console, master station console and a turbine control console.

The master area console contains all controls for determining the mode of operation for the system as a whole.

The dispatching console contains all controls for inserting transmission-loss penalty factors and means for providing signals for the wire line, carrier or microwave channels to each station.

The master station console contains all controls for determining the mode of operation of the station as a whole.

The turbine control console has all controls for determing the mode of operation of individual turbines and for inserting the complete incremental cost data for the individual turbine and boiler combination. Each turbine control console can handle two turbines.

The single-channel control system adjusts total generation to maintain desired average conditions of frequency and tie-line load. With the system it is also possible to allocate total generation automatically in order to realize a minimum fuel output to the system based on a continuous

(*Continued on page* 30)

use of incremental cost data for every machine under control.

Canada Requirements to Demand Aid of Atomic Power Plants

THE predicted 250 per cent increase in installed electrical generating capacity for Canada by 1975 is going to demand the aid of atomic power plants, a General Electric atomic expert said recently.

O. B. Falls, Jr., manager of marketing for the G-E Atomic Power Equipment Department, Schenectady, N. Y., said that Canada would probably closely parallel the expected development of power facilities, both conventional and atomic, in the United States.

In the United States, he reported, G-E estimates that nuclear-fuel plants will make up about 2 per cent of all new power plants added to utility systems in 1965. This per cent, he said, will rise to 14 in 1970.

"Our analysis indicates that once nuclear plants become competitive, they will expand rather rapidly—increasing to 44 per cent by 1975 and 65 per cent by 1980," he pointed out.

Mr. Falls said that W. J. Bennett, president of Atomic Energy of Canada, Limited, has released figures indicating a 250 per cent increase in Canadian electrical generating capacity by 1975.

Westinghouse Unveils First Privately-financed Atomic Parts Manufacturing Plant

THE Westinghouse Electric Corporation recently unveiled the world's first privately-financed factory designed to produce parts for atomic power plants. The plant is located in Cheswick, Pennsylvania.

During a special tour through the multi-million dollar installation, members of the press saw skilled machinists manufacturing "canned" motor-pumps that send radioactive fluids through the hermetically-sealed systems of nuclear power plants.

At the same time, company officials announced that Westinghouse has constructed within this factory a high pressure "proving ground" designed expressly for the full-scale testing of canned motor-pumps and valves used in nuclear power plants and atomic power systems.

William C. Miller, manager of the Westinghouse atomic equipment department, said this new pump testing facility, or "test loop" as it is called, is believed to be the largest of its kind in the world. It is capable of testing equipment at very high pressures, temperatures, and capacities.

An instrumentation laboratory has been installed at the plant. Purpose of the laboratory is to advance the art of reactor instrumentation and control.

The canned motor-pump—first product to be manufactured at the Cheswick plant—was developed and first built for the Atomic Energy Commission's Bettis plant, which is operated by Westinghouse, as one of the requirements in the firm's contract with the Atomic Energy Commission to build the nuclear power plant for the first atomic submarine, the *U.S.S. Nautilus.*

Second U.S. Steel "Operation Snowflake" Begins

BY direct mail and personal presentations, U.S. Steel Corporation is offering manufacturers the opportunity to participate in a second industry-wide Christmas promotion of major appliances.

Like the first "Operation Snowflake," the 1955 campaign will use the slogan "Make It A White Christmas —Give Her A Major Appliance." It will again urge the purchase of dishwashers, ranges, refrigerators, freezers, water heaters, dryers, washers and ironers — known as "White Goods" in the trade.

Off to an earlier start and using the experience gained during last year's surprisingly successful trial campaign, U.S. Steel has substantially increased its advertising and promotion budget and greatly enlarged the scope of the project. Extensive consumer and trade advertising is planned. Active participation by national associations of manufacturers, distributors, retailers, utilities, financial institutions and newspapers has been pledged, according to the announcement. New marketing techniques learned from similar campaigns during the year are being put into operation.

Promotional activities include direct mail to 550 electric companies, 1,000 gas companies, and 950 Rural Electrification Administration co-operatives. Complete kits of advertising and promotion material will be distributed directly to distributors, retailers, utilities and banks.

"Operation Snowflake" will be a 6-week promotion reaching the American family during the Christmas shopping season, starting in mid-November and continuing until Christmas. It is reported that as a result of last year's campaign, appliance sales increased 20 to 40 per cent during a traditionally slack season in areas all over the country where dealers, newspapers, utilities and lending institutions actively tied in their selling efforts. With all the additional effort and cooperation being put into the 1955 campaign, U. S. Steel Corporation expects even greater success.

New Brochure Describes Peerless Dri-Stat Photocopy Equipment

DRY-PROCESS photocopying is rapidly finding a place in every kind of office, for copying correspondence, incoming orders, invoices, and many other kinds of typed or drawn originals, according to Peerless Photo Products, Inc.

A new eight-page brochure points out many of these applications and describes the improved line of Dri-Stat dry-process photocopying equipment and materials made by Peerless. These include a completely redesigned combination printer-and-processor, a new flatbed printer specially for copying from books, and Dri-Stat "Bright-Light" paper, with which copies can be made under normal office light four to five times brighter than can be permitted with any other transfer-process photocopying system.

Copies of the brochure are available free on request from Peerless Photo Products, Inc., Shoreham, L. I., New York, or from any Dri-Stat distributor.

Peoples Natural Gas Wins Safety Award

THE National Safety Council presented the Award of Honor plaque to The Peoples Natural Gas Company in recognition of its 1954 Safety Record. This plaque is awarded to companies establishing disabling injury rates significantly lower than the national average.

In three out of the last four years, including 1954, Peoples has, in addition, placed first among major gas companies in the annual contest sponsored by the National Safety Council.

The Award of Honor was the second the company has received. A previous Award of Honor plaque was awarded Peoples for its 1951 Safety Record.

BEFORE YOU BREAK GROUND

Construction of a new plant starts when the steam shovel takes its first bite of earth. But the actual building process begins *before* you break ground.

It begins when the need for new plant facilities is recognized and engineers are called into action. Then it develops on the drawing board—through plant layouts, working drawings, engineering specifications. It requires consideration of engineering and production techniques—analysis of all factors that must be taken into account before construction can start.

Ebasco skilled engineers and constructors have experience in every phase of the building process—from preliminary planning right up to a plant's successful operation. This experience has enabled Ebasco to complete more than two billion dollars' worth of new plant design and construction for many industries, in many parts of the world.

The engineering and construction firm you select to design and build your plant may well hold the key to its future success. If *you* are considering such a project, send for our booklet, "The Inside Story of Outside Help." It describes our engineering and construction services as well as the wide range of consulting services Ebasco offers business and industry. Write: Ebasco Services Incorporated, Two Rector Street, New York 6, N. Y.

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YOUR Special Advantage for AUGUST

. . . . this is the SPECIAL ADVANTAGE STICKER which dozens of companies are using this month on the front cover of Electrified Industry. →

ENGINEERING HELP — one of the many plus services that our customers enjoy, is free help and advice on lighting, and on heat, and power use. Please call us.

CONSUMERS POWER COMPANY

Pass to_____

_____

_____

THE SPECIAL ADVANTAGES of electric service include: . . Convenience . . . Flexibility . . Instant Starts . . . Economy . . . Reliability . . Cleanliness . . . Good Regulation . . . Ability to take Overloads . . . and the Cooperation and Advice on Electrical Problems which most power companies offer.

Customers are reminded of you and of the SPECIAL ADVANTAGES of being on your lines. In addition your stickers help them route your messages to additional readers.

Some companies make up stickers which carry their own slogan (a good idea). Others have Reddy Kilowatt remind the readers that electric power is their willing servant.

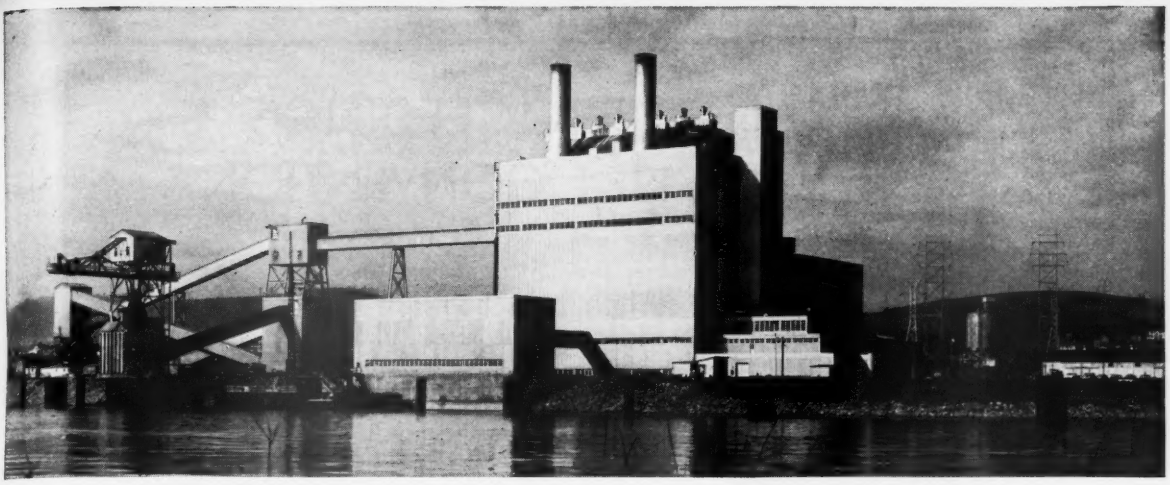
Power salesmen make friends for your companies and add to your "net divisable." Years ago they decided that they needed help to overcome the effects of the competitive power, diesel-and-steam, agin-the-utilities magazines that they saw on their customers desks. They helped create the picture magazine which tells the true story that electricity, properly used, is worth many times its cost.

They use this magazine to make 21¢ calls for them in between the $5 and $10 calls they make in person.

By using Electrified Industry they are able to maintain better-than-ever customer contact and increase the net revenue of the utilities.

ELECTRIFIED INDUSTRY and ***Today's Business***

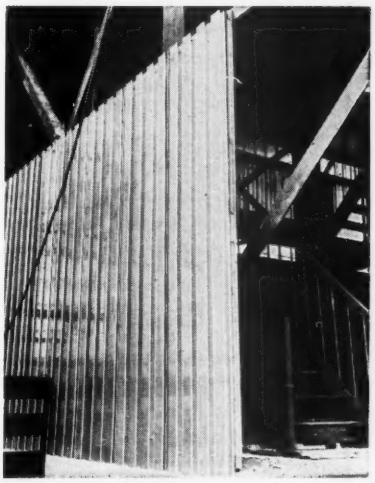
Martin Publications—20 No. Wacker Dr., Chicago 6



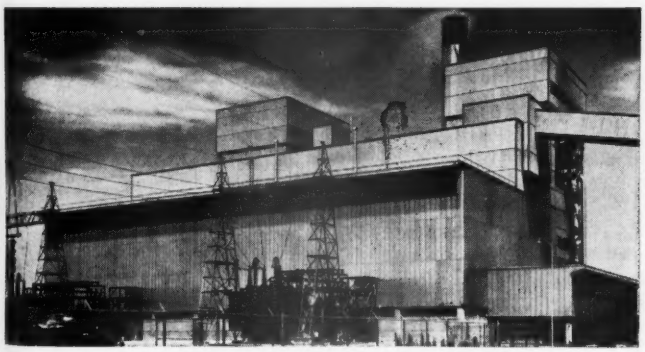
Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.

Why fine new power plants everywhere have Q-Panel Walls

Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be demounted and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12″ masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.



More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.

Robertson

Q-Panels

H. H. Robertson Company

2400 FARMERS BANK BLDG. • PITTSBURGH 22, PA.

Offices in Principal Cities

Please send a free copy of your Q-Panel Catalog.

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PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants, and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design, and construction.

(Professional Directory Continued on Next Page)

PROFESSIONAL DIRECTORY *(continued)*

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*Fortnightly advertisers not in this issue.

To postpone electric utility investment in added generating station capacity

–an Electro-Mobile Power unit, costing about $100 per kw., places 1,000 kw. at any point of need...

–reducing fixed charges...

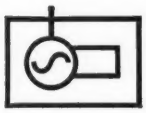
–obviating all new high-line expense...

–eliminating transmission-line loss.

It can be completely self-operated...

–and later used to fill other needs, anywhere, in a speedy, economical relocation.

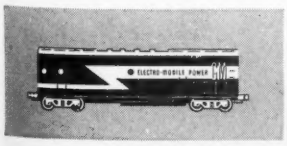
Write for simple formula explaining investment advantages of Electro-Mobile Power to:

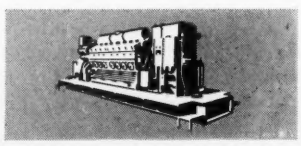


Rail car, truck trailer and portable units— 350 to 1,000 kw.

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS • LA GRANGE, ILLINOIS





Sold and serviced directly through a manufacturer's organization. Electro-Motive Division offices located in: New York City, Chicago, Jacksonville, St. Louis and San Francisco.

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First showing of America's newest, most advanced lightweight train —and many other marvels of modern Diesel power.

Detroit Edison...

...RESTORES SERVICE FASTER

A Motorola pack set is used in locating a cable fault by the sheath drop method.

This cable hauling truck is directed from job to job by the Underground Lines Department dispatcher.

When a network bank goes out in this busy metropolis, power is obtained from other banks . . . but the disabled bank must be put back in service fast to prevent possible overload. With 55 radio equipped cars and trucks out doing routine service work, one is usually just a few blocks away from the trouble. With Motorola 2-way radio, this crew is rushed direct to the scene, saving many precious minutes of travel time.

In addition, thousands of dollars are saved every year with Motorola radio in these six major fields of operation:

1. **For communications between mobile units and system supervisors.**
2. **In the Underground Lines Department which handles the installation and maintenance of power, control, and communication cables.**
3. **By the Fault Location Group in cable testing.**
4. **By the Substation Department which operates and maintains network banks.**
5. **By the Stores Department for use in handling certain strategic materials.**
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Motorola consistently supplies more mobile and portable radio than all others combined.
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